

**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

Harbinger Capital Partners LLC;  
Harbinger Capital Partners II LP;  
Harbinger Capital Partners Master Fund I, LTD.;  
Harbinger Capital Partners Special Situations Fund, L.P.;  
Harbinger Capital Partners Special Situations GP, LLC;  
HGW GP, LTD;  
HGW Holding Company, L.P.;  
HGW US GP Corp.;  
HGW US Holding Company, L.P.;  
Credit Distressed Blue Line Master Fund, LTD.; and  
Global Opportunities Breakaway LTD.

Plaintiffs,

v.

Deere & Company; Garmin International, Inc.;  
Trimble Navigation Limited;  
The U.S. GPS Industry Council; and  
The Coalition to Save Our GPS,

Defendants.

No. 13 cv 5543



**FIRST AMENDED COMPLAINT**

**JURY TRIAL DEMANDED**

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## **SUMMARY OF COMPLAINT**

1. In March 2010, Plaintiffs invested billions of dollars in a new mobile telecommunications network, through a company called LightSquared, that upon its completion would, according to the Federal Communications Commission (the “FCC”)<sup>1</sup>, provide a “significant public benefit.” Plaintiffs’ new network would be available to all on a wholesale basis and would thus provide an alternative to and create significant competition with the dominant service providers like AT&T and Verizon. The result of LightSquared deploying this new network would be lower prices, greater coverage in underserved areas, and more consumer choice.

2. Plaintiffs invested in this new communications network only after the FCC assured Plaintiffs they had full FCC authority to use the necessary electromagnetic spectrum for its LightSquared network. The FCC provided this authorization in 2003, 2004, and 2005, and explicitly reaffirmed it on March 26, 2010. Such approval was a negotiated precondition to Plaintiffs’ investment commitment.

3. Defendants, makers of GPS products, had worked continuously with Plaintiffs (and their predecessors) from 2002 to 2009 to resolve issues relating to spectrum “interference” that might occur from Plaintiffs’ use of the spectrum authorized by the FCC. These issues arose because the spectrum authorized for use by GPS devices lay between the two parts of Plaintiffs’ authorized spectrum. Plaintiffs (and their predecessors) incurred substantial costs to solve all earlier problems with spectrum interference. Indeed, Defendants commended them for doing so, calling them “good spectrum neighbors.”

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<sup>1</sup> An Appendix lists alphabetically all defined terms. Emphasis throughout the complaint is added unless otherwise noted.

4. Plaintiffs never would have incurred these costs, or made their subsequent investments in the new network, had Defendants disclosed in 2002-2009 what Defendants ultimately revealed in late 2011 and 2012: that Defendants designed their GPS products to use the very same spectrum the FCC assigned to Plaintiffs and that Plaintiffs' authorized use of that spectrum would cause Defendants' GPS products to malfunction. As FCC officials put it in their September 2012 testimony before the U.S. House of Representatives, what Defendants eventually revealed was that "GPS legacy equipment effectively treats the GPS spectrum and [the spectrum allocated to Plaintiffs' network] as one band."

5. Just before Plaintiffs were about to take their new network live, Defendants began to disclose that their GPS products would cease to work if Plaintiffs used the spectrum in the manner already authorized by the FCC (in 2003, 2004, 2005, and 2010). As FCC officials put it, it was as if the Defendants had been authorized to drive only in the right lane but insisted in also "driving in the left lane with impunity . . . but now that it looks like the left hand lane might actually have traffic in it, the GPS community is yelling bloody murder (literally). . . . The GPS community feels that they should be able to drive their double-wide trailer down the middle lane and left lanes without regard to [Plaintiffs'] longstanding right to be in the left lane."

6. Even worse, as Defendants well knew, since 2003 Defendants had manufactured and sold hundreds of millions of products with these vulnerabilities, which, according to Defendants, now made recall and retrofit impossible. This was done to increase Defendants' profits, or, as FCC officials put it: "the GPS community continued to build receivers that they knew were susceptible to interference (remember that they are driving in the wrong lane) because it was cheaper to do so . . . ."

7. Defendants also belatedly disclosed that a small percentage of these poorly-designed, cost-cutting GPS receivers were embedded in critical safety devices. According to Defendants, this meant that, if Plaintiffs' new network were allowed to go live, GPS products could fail in a way that caused catastrophes such as plane crashes.

8. Defendants have never substantiated their alarmist claims. However, based on Defendants' conduct, the FCC suspended Plaintiffs' right to deploy their network. As a result, numerous lucrative contracts were cancelled and Plaintiffs' company LightSquared descended into bankruptcy in May 2012. Despite Plaintiffs' ongoing attempts to resolve GPS issues and mitigate damages, Plaintiffs have already lost a great deal and now stand to lose their entire investment. Plaintiffs never would have made this investment if Defendants had told the truth earlier. To recoup their loss, Plaintiffs bring this lawsuit.

### **JURISDICTION AND VENUE**

9. Original jurisdiction exists under 28 U.S.C. § 1331 for claims arising under 15 U.S.C. § 78a *et seq.* and 17 C.F.R. § 240.10b-5. All other claims are part of the same case and controversy; hence supplemental jurisdiction exists.

10. Venue exists under 28 U.S.C. § 1391(b) because Plaintiffs have their principal places of business in this District; substantial events and omissions giving rise to all claims occurred in this District; and a substantial part of the property that is the subject of the action is situated here.

### **PLAINTIFFS**

11. Harbinger Capital Partners LLC ("Harbinger Capital"), a limited-liability company organized in Delaware, has its principal offices located in New York, NY. Harbinger Capital is the investment manager for the Master Fund and the Special Situations Fund.

12. Harbinger Capital Partners II LP (“Capital Partners II”), a limited partnership organized in Delaware, has its principal offices in New York, NY. Capital Partners II is the investment manager for Blue Line and Breakaway.

13. Harbinger Capital Partners Master Fund I, LTD. (the “Master Fund”), a limited-liability company organized in the Cayman Islands, has its principal offices in New York, NY. The Master Fund is engaged in the business of making debt and equity investments.

14. Harbinger Capital Partners Special Situations Fund, L.P. (the “Special Situations Fund”), a limited partnership organized in Delaware, has its principal offices in New York, NY. The Special Situations Fund is engaged in the business of making debt and equity investments.

15. Harbinger Capital Partners Special Situations GP, LLC (“Special Situations GP”), a limited liability company organized in Delaware, has its principal offices in New York, NY. It is the general partner of the Special Situations Fund.

16. HGW GP, LTD, a Cayman Islands exempted company, has its principal offices in New York, NY. It is engaged in the business of making debt and equity investments.

17. HGW Holding Company, L.P., a limited partnership organized in the Cayman Islands, has its principal offices in New York, NY. It is engaged in the business of making debt and equity investments.

18. HGW US GP Corp., a Delaware Corporation, has its principal offices in New York, NY. It is engaged in the business of making debt and equity investments.

19. HGW US Holding Company, L.P. a limited partnership organized in Delaware, has its principal offices in New York, NY. It is engaged in the business of making debt and equity investments.



20. Credit Distressed Blue Line Master Fund, LTD. (“Blue Line”), a limited liability company organized in the Cayman Islands, has its principal offices in New York, NY. Blue Line is engaged in the business of making debt and equity investments.

21. Global Opportunities Breakaway LTD. (“Breakaway”), a limited liability company organized in Cayman Islands, has its principal offices in New York, NY. Breakaway is engaged in the business of making debt and equity investments.

22. The Complaint will refer to one or more Plaintiffs collectively as “Harbinger” unless it is necessary for clarity to identify a company by its specific name.

23. In addition to the named Plaintiffs, the complaint will also refer to several affiliated and predecessor companies. On March 27, 2009, SkyTerra Communications, Inc., as Transferor, and Harbinger, as Transferee, filed with the FCC their Applications for Consent to Transfer of Control of SkyTerra Subsidiary, LLC. On March 26, 2010, the FCC issued a Memorandum Opinion and Order and Declaratory Ruling approving Harbinger’s acquisition of control via a merger. SkyTerra Communications, Inc. then owed 100% of an operating subsidiary called SkyTerra LP, which in turn was the sole member and 100% owner of SkyTerra Subsidiary, LLC (now known as LightSquared Subsidiary LLC, following a name change on July 20, 2010). The Complaint will refer to this company as LightSquared when discussing periods after March 2010.

24. SkyTerra Subsidiary, LLC (now LightSquared) had before March 26, 2010 been issued a number of licenses and authorizations by the FCC. For periods prior to the creation of LightSquared, the Complaint will refer to the above companies with SkyTerra in their name, and all their affiliates and predecessors, collectively as “SkyTerra” unless it is necessary for clarity to identify a company by its specific name.

**DEFENDANTS**

25. Deere & Company (“Deere”) is a Delaware corporation. On information and belief, Deere’s primary offices are located in Moline, IL. Deere is engaged, among other things, in the design, development, manufacture, and marketing of navigation, communications, and information products using GPS technology. It does substantial business in this district.

26. Garmin International, Inc. (“Garmin”) is a California corporation. On information and belief, its primary offices are located at 7306 Alondra Blvd., Paramount, CA 90723. Garmin is a subsidiary of Garmin Ltd., which is a corporation organized under the laws of Switzerland. Garmin is engaged in the design, development, manufacture, and marketing of navigation, communications, and information products using GPS technology. It does substantial business in this district.

27. Trimble Navigation Limited (“Trimble”) is a California corporation. On information and belief, its primary offices are located at 935 Stewart Drive, Sunnyvale, CA. Trimble is engaged in the design, development, manufacture, and marketing of navigation, communications, and information products using GPS technology. It does substantial business in this district.

28. The U.S. GPS Industry Council (the “USGPSIC”) is a trade association created in July 1991 and headquartered in Washington, D.C. Its purported goal is to promote commercial uses of GPS technology, and it claims to have “a long and proud history of highly effective advocacy on behalf of the GPS industry.” Its members include Trimble, Garmin, and Deere. On information and belief, Trimble, Garmin, and Deere have exercised complete control over the Council with respect to the facts alleged in this Complaint. Upon information and belief, indicia of this control include: (1) the USGPSIC’s inadequate capitalization to

adequately compensate Harbinger for the damages it has suffered as a result of USGPSIC's conduct; (2) the USGPSIC's lack of discretion to disregard the instructions of Deere, Garmin and Trimble with respect to the facts alleged below; (3) the lack of arms-length dealings between the USGPSIC (on the one hand) and Deere, Garmin and Trimble (on the other) with respect to the facts alleged below; and (4) payment of the USGPSIC's expenses by Deere, Garmin and Trimble.

29. The Coalition to Save Our GPS (the "Coalition") is a group of industry and company representatives created in February 2011. Upon information and belief, its operations primarily originate from Washington, D.C. and its members include Deere, Garmin and Trimble. On information and belief, Deere, Garmin and Trimble have exercised complete control over the Coalition with respect to the facts alleged in this Complaint. Upon information and belief, indicia of this control include: (1) the Coalition's inadequate capitalization to adequately compensate Harbinger for the damages it has suffered as a result of the Coalition's conduct; (2) the Coalition's lack of discretion to disregard the instructions of Deere, Garmin and Trimble with respect to the facts alleged below; (3) the lack of arms-length dealings between the Coalition (on the one hand) and Deere, Garmin and Trimble (on the other) with respect to the facts alleged below; and (4) payment of the Coalition's expenses by Deere, Garmin and Trimble.

30. For most of the facts alleged in this Complaint, Deere, Garmin and Trimble have worked in concert and through the USGPSIC and the Coalition.

## **FACTS**

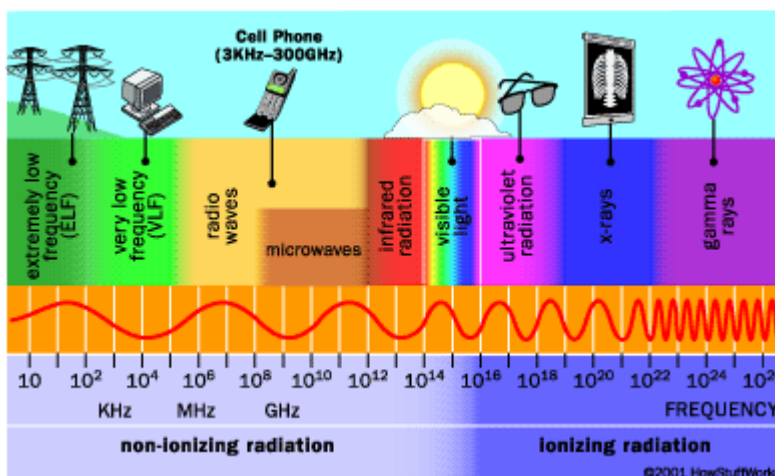
### **I. THE WIRELESS COMMUNICATIONS MARKET BEFORE HARBINGER'S INVESTMENTS.**

#### **A. Spectrum explained**

31. According to the FCC's website: "Spectrum is the range of electromagnetic radio frequencies used to transmit sound, data, and video across the country. It is what carries voice between cellphones, television shows from broadcasters to your TV, and online information from one computer to the next, wirelessly."

32. The radio spectrum used for wireless communications is a subset of the vast field of electromagnetic energy all around us, comprised of the energy emitted and absorbed by oscillations of charged particles. These oscillations occur in a broad range of frequencies measured by a unit known as the "hertz" (abbreviated "Hz"). A hertz is one cycle of oscillation per second. KiloHertz (kHz) means 1,000 Hertz. MegaHertz (MHz) means 1000 kHz and GigaHertz (GHz) means 1,000 MegaHertz.

33. Not every portion of the spectrum is suitable for every use. The portion suitable for radio and mobile communications – often referred to as the "radio waves" or "radio spectrum" – is located between approximately 8.3kHz and 275GHz. The following graphic demonstrates how radio waves use only a small portion of all electromagnetic spectrum.



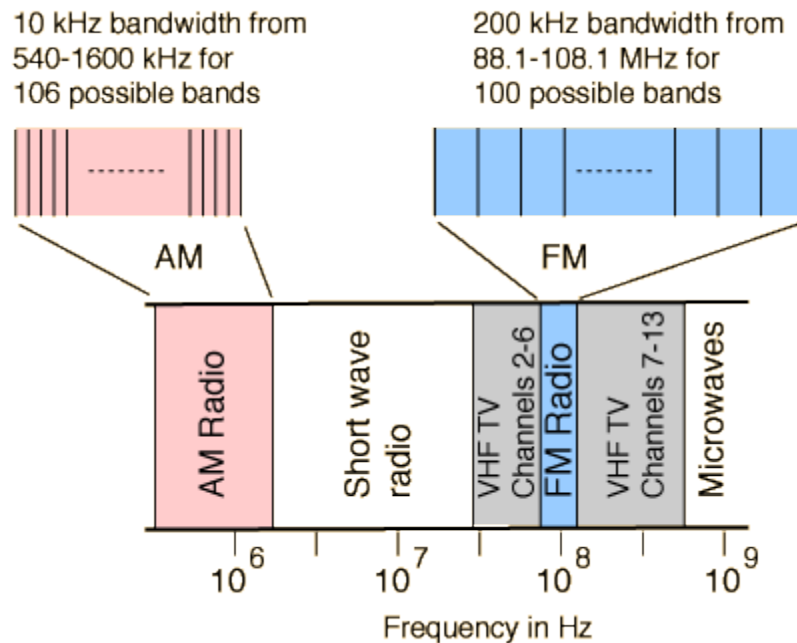
34. While the radio wave spectrum is not large, humans have recently found an abundance of uses for it. Because of the resultant scarcity and the international ubiquity of electromagnetic waves, governments have had to cooperate to manage the use of spectrum. Within the U.S. specifically, the FCC and the National Telecommunications and Information Administration (“NTIA”) share responsibility for managing the spectrum. NTIA manages spectrum used by the federal government, while the FCC is responsible for spectrum used by the private sector. Internationally, the U.S. cooperates with other governments through the International Telecommunication Union (“ITU”).

35. Section 303(y) of the Communications Act of 1934 confers on the FCC the “authority to allocate electromagnetic spectrum” to different kinds of radio services (*e.g.*, TV and radio broadcasts, mobile communications) within the U.S. and by coordinating with other countries. The FCC not only allocates available spectrum to specific radio service uses, it also assigns spectrum within those allocations to specific users.

36. These allocations and assignments are granted in sections of contiguous hertz that are typically referred to as “bands.” The use of the term “band” to describe a range of spectrum allocated to a specific use leads to such terms as “bandwidth” and “broadband.” “Bandwidth” refers to the width of the frequency range in a specified band. A greater

bandwidth signifies a greater capacity to transmit information. “Broadband” refers to a wide or “broad” allocation of spectrum, which is thus capable of carrying a comparatively large amount of information.

37. In keeping with this nomenclature, the spectrum allocations are often depicted graphically in pictures that look like bands. For example, the FCC has allocated the frequency band between 540-1600 kHz for the broadcast of AM radio and the frequency band of 88.1 MHz-108.1 MHz for the broadcast of FM radio. The following band graph shows how these radio spectrum allocations are abutted by separate allocations for frequency for use by short wave radio operators and broadcasters of VHF TV channels:



38. As discussed in more detail below, the FCC and NTIA, respectively, have assigned frequency bands to the usage category known as Mobile Satellite Service (“MSS”) and to the usage category known as Radionavigation Satellite Service (“RNSS”). The assignment to MSS usage incorporates the spectrum used by the Harbinger-sponsored network,

while the assignment to RNSS usage includes the spectrum used by the government-funded satellites that transmit GPS signals. These assignments to RNSS and the Harbinger-sponsored network were in close proximity.

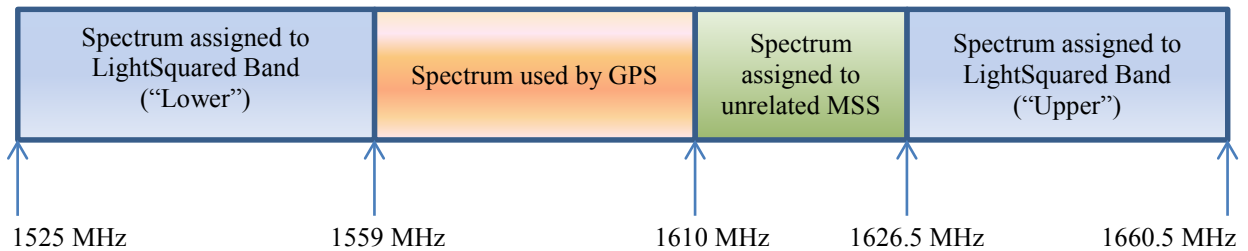
39. Specifically, the frequency assigned to MSS uses was in two blocks: 1525 MHz to 1559 MHz and 1610 MHz to 1660.5 MHz. Portions of this assignment – including 1610 MHz to 1626.5 MHz and a few other small slivers of spectrum – were for MSS uses that are not relevant to this litigation. However, the remainder of the assignment – which again is in two blocks: most of 1525 MHz to 1559 MHz and most of 1626.5 MHz to 1660.5 MHz – represents the spectrum assigned to the Harbinger-sponsored network, which had to “coordinate” with other entities that were also authorized within this spectrum. One such company, Inmarsat (“ISAT”), is discussed in further detail below. Otherwise, these additional entities will be ignored as they are not relevant to this complaint. For the remainder of the complaint, we will refer to the bands of spectrum used by the Harbinger-sponsored network as the “LightSquared Band.”<sup>2</sup>

40. In between the two halves of the LightSquared Band is the allocation to RNSS that has been assigned to the GPS satellite system. We will call it the “GPS Band.”

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<sup>2</sup> Many people, including LightSquared employees in memos and conversation, use the term “L-band” to refer to what we are calling the LightSquared Band. Others use “L-band” to mean not just those bands but also bands surrounding them. Other variations are also used. To avoid any confusion, we will avoid use of “L-band” in this complaint.

41. To try to clarify the relevant points of this complicated allocation and assignment scheme, we provide the following simplified illustration:



This illustration is not a complete depiction of all entities operating within the MSS band or all RNSS assignments. The illustration simply shows the main facts regarding the proximity of the “Lower” and “Upper” segments of the LightSquared Band to the GPS Band. It will be used in various ways throughout the remainder of the complaint to explain spectrum issues.

**B. All wireless communications networks require a receiver and a transmitter; the transmitter can be either satellite or terrestrial.**

42. Each signal communication sent over electromagnetic spectrum goes from a “transmitter” to a “receiver.”

43. The transmitter transmits or “sends” the electromagnetic signal. The transmitter can be physically located on a space-based satellite or on the ground. In the latter case, it is called land-based or “terrestrial.” The receiver receives, “listens to,” or “hears” the electromagnetic signal sent by the transmitter. A device that both transmits and receives is called a “transceiver.” Cellphone towers and cell phones are thus both “terrestrial transceivers” since each is ground-based and sends and receives signals to each other. A GPS navigation device, which only receives signals from satellites and does not send any signal (though it may be incorporated into another device that performs other functions), is solely a “receiver.” This distinction becomes important below when we discuss FCC jurisdiction. The FCC regulates transmitters and transceivers, but imposes essentially no regulations on pure receivers.



44. GPS receivers manufactured by Defendants receive their signals from satellites launched and funded by the U.S. government. GPS receivers range from small watches that individuals use for recreational purposes, such as measuring the distance and time of their morning jog, to quite sophisticated devices installed in airplanes, oceangoing ships, high-precision equipment and military weapons. The performance needs and the costs vary widely among these receivers, which therefore have hundreds of different configurations and operations systems, all of which keep changing as technology changes.

45. Commercial transmitters and transceivers must be approved by the FCC. This requires full disclosure of operational parameters. Devices that act solely as receivers are not subject to FCC regulation or approval (other than incidental disclosures required for equipment certification, an issue not relevant to this complaint). For this reason, the operational parameters of receivers like the GPS devices Defendants manufactured are kept proprietary and confidential. Thus, to determine whether there can be issues between a given receiver and transmitter (or transceiver), the manufacturer of the receiver has all the information but the manufacturer of the transmitter does not.

46. For the Harbinger-sponsored network, the transmitter (or, more precisely, the transceiver) is either one of thousands of terrestrial stations (36,000 were planned and approved), or one of LightSquared's satellites, notably the SkyTerra 1 satellite, launched in 2010 after receiving nearly a billion dollars of funding from Harbinger. The receiver (again, more precisely, the corresponding transceiver) for the Harbinger-sponsored network is generally a personal mobile communication device such as a phone, tablet, or wireless-enabled laptop computer.

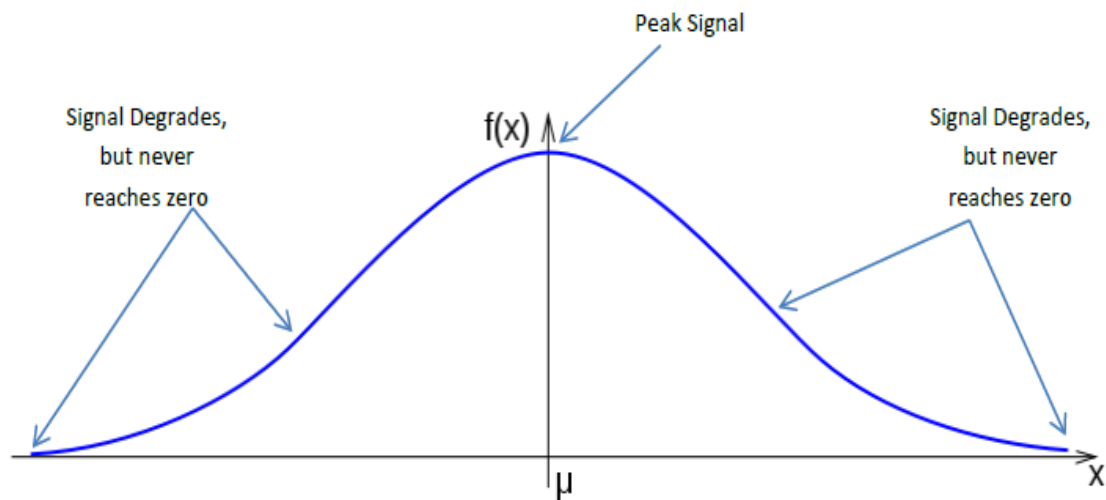
47. Transmitters on the Harbinger-sponsored network can be adjusted to transmit signals only within the assigned spectrum. If this is not done effectively, “Out-of-Band Emissions” (“OOBE”)<sup>3</sup> will transmit into neighboring spectra and cause “interference” with reception of desired transmittals. GPS receivers can be manufactured (often with “filters”) to receive only signals within a designated frequency range. If this is not done effectively, the receivers may experience “overload interference” from Out-of-Band Receptions (“OOBR interference”) as they “listen in” to frequencies where they are not authorized to operate and are overpowered by signals broadcasting there with proper authorization.

48. In combination, the settings of receivers and transmitters operating in neighboring spectra minimize interference to the point that unwanted transmittals (“noise”) do not overwhelm the wanted transmittals (“signal”). This is often quantified as a “signal to noise ratio” (“S/N”) or “carrier to noise ratio” (“C/N”). The exact technical details of how this interference is minimized are not important to understand for present purposes. What is important to understand, however, is the fundamental fact that while some level of interference will always exist, it can be minimized or managed for receivers to obtain intelligible signals.

49. It is impossible to eliminate 100% of interference. The reason for this is complicated, but the basic concept can be illustrated with a simple graph:

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<sup>3</sup> Out-of-Band Emissions, or OOBE, are sometimes referred to as “Out-of-Channel Emissions” or “OOCE” and by other names. To minimize confusion, we refer to them only as OOBE.

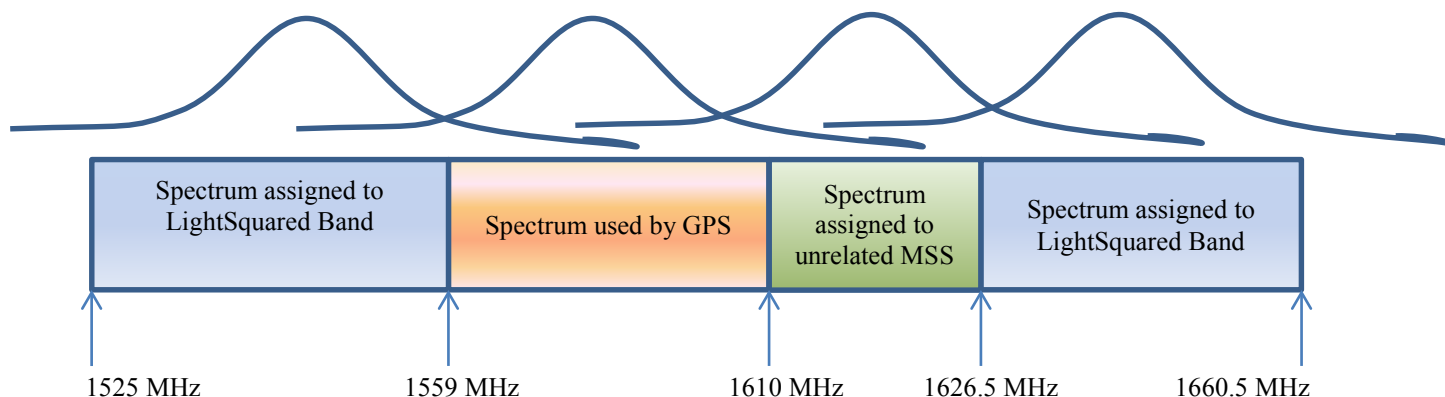


This is a visual depiction of what is known as a “Gaussian” distribution. It is nothing more than a “bell curve” that follows a specific mathematical model. It models the behavior of a radio signal as it degrades from its peak signal power. That peak signal power is indicated at the top of the bell, with the degrading signal extending out to the left and right.

50. The key points from this diagram do not require an understanding of the underlying physics and mathematics. These points are as follows: (1) the power of the signal at any given point on the curve is indicated by how much space is between the curve line and the base line (*i.e.*, the highest power is at the peak and the lowest power is at the edges); and (2) while the signal degrades both to the left and right from the peak, it does so infinitely without ever reaching zero.

51. For this reason, a radio signal transmitted within one band of spectrum will always carry over, at least to some extent, to a neighboring spectrum (even to distant bands of

spectrum, though eventually it may no longer be detectable). Combining the image of the bell curve with the simplified spectrum graph shows how this works:



While the peak for each user's signal is centered within its own assigned spectrum, each user inevitably sends some signal into each neighbor's spectrum. Though one cannot reduce signal spillover to zero, one can reduce the spillover to an amount small enough that normal uses are not interrupted or "interfered" with.

52. The FCC creates and enforces rules to prevent undue interference. As discussed in more detail below, interference issues can also be resolved (and often are) by agreements between users.

**C. Initially spectrum was allocated separately to terrestrial mobile and satellite mobile systems in a way that created a shortage of terrestrial mobile capacity once mobile communication devices (like cellphones) began to proliferate.**

53. Before anyone invented modern mobile consumer devices (cellphones, iPads, etc.), the FCC allocated frequency in a way that years later made it difficult to build sufficient mobile communications capacity. Before 2010, essentially two companies, AT&T and Verizon, had market dominance. The result resembled a "cartel" (that is, a market structure that generates higher consumer prices than are found in markets with multiple competitors).

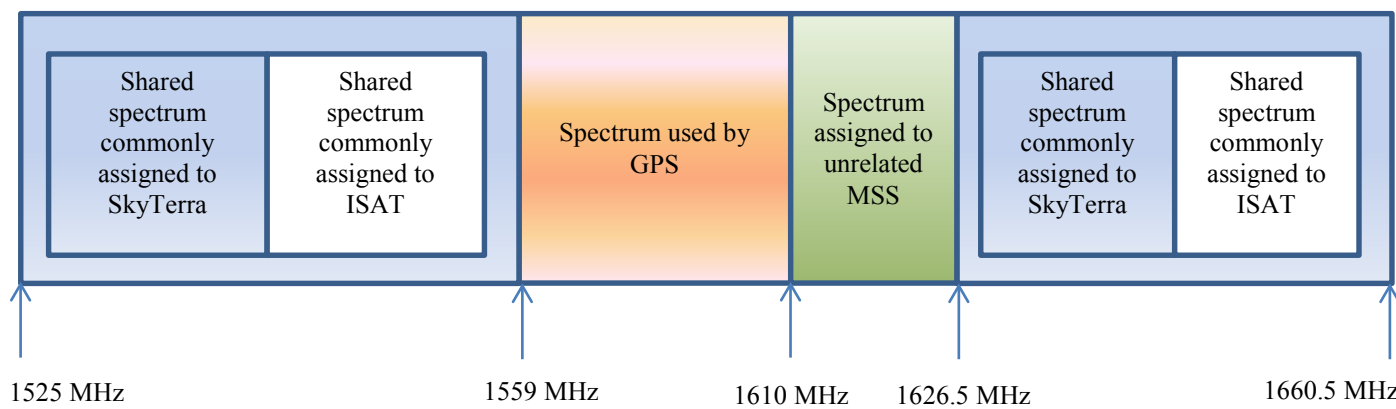
This market configuration concerned the FCC, as it made clear by 2000 and especially after a new FCC chairman was appointed in early 2009. This spectrum allocation problem stems from a combination of two subsidiary problems.

54. First, the FCC's original allocation of spectrum to MSS uses was done in such a way as to preclude any terrestrial transmissions within this band. In contrast, when the FCC made its original assignments for cellphone service, the majority of which were acquired by AT&T and Verizon, it specifically allowed the transmission of signals from terrestrial transmitters (such as cellphone towers).

55. Second, when the FCC made its original assignments within the LightSquared Band, it did not grant each individual operator its own distinct blocks of spectrum. Instead, the FCC gave all users within the band the right to use MSS spectrum in common, leaving individual operators the task of cooperatively resolving any interference issues caused by their common use (often called "coordination").

56. One of the companies assigned to the LightSquared Band was a predecessor to LightSquared, American Mobile Satellite Corporation. Licensed in 1989, it began operations in the 1990s, and was in the business of constructing and operating satellite communications networks. The company went through various corporate reorganizations and name changes – with a portion of it becoming a company known at various times as Motient Services, Inc., Mobile Satellite Ventures LP (MSV), SkyTerra LP, SkyTerra Communications, Inc., and eventually a constituent company in the March 2010 merger that produced the company named LightSquared in 2010. To avoid using so many names, this complaint will call all pre-March 2010 predecessors of LightSquared "SkyTerra" unless a specific name is needed for clarity on some specific issue.

57. The FCC also allowed a company now called Inmarsat (often referred to as “ISAT”) to operate in the MSS spectrum. ISAT was in the business of mobile satellite communications and a competitor of SkyTerra. As noted above, others were also allowed to operate in the MSS spectrum in common with ISAT and SkyTerra but for present purposes they need not be discussed. A simplified graphic summary of the situation described thus far follows:



58. This arrangement meant that operators within the MSS spectrum, like SkyTerra, needed to adjust their signal transmissions to avoid both “out-of-band” interference with their spectrum neighbors (GPS and other MSS users) and “in-band” interference with each other. The effect was that the carrying capacity of the MSS spectrum was further reduced.

59. This situation may have caused no problems when it was implemented in the 1980s, when the main uses contemplated were such things as the sending of simple signals to and from satellites, but it became increasingly inefficient as technology changed and as modern mobile communications demanded substantially more bandwidth (for emails, movies, music, pictures, etc.) than had been anticipated. Smartphones, tablets, and mobile-enabled laptops consume, respectively, 50, 120, and 368 times the data consumed by a 1989 phone and need correspondingly greater bandwidth.

60. Economic efficiency and market forces normally would have caused holders of MSS (satellite) spectrum to convert spectrum use into broad bands that allowed terrestrial transmissions, but such a solution required FCC approval.

61. Because of this market structure, as the new century began the nation's existing wireless communications network had the following three problems:

- First, not enough of the nation's spectrum was being utilized for terrestrial-based mobile communications. This created a physical barrier to entry for new competitors with predictable results of thwarting competition in an important new sector of the American economy.<sup>4</sup>
- Second, the major carriers that dominated the spectrum authorized for terrestrial use were concentrating on major markets. Rural areas were being left out for simple economic reasons: terrestrial broadcast stations are very expensive to install and, once installed, are only capable of broadcasting to a relatively small geographic area. For this reason, AT&T and Verizon had every incentive to build out terrestrial broadcast networks in densely populated urban and suburban areas. The costs of build-out may have been high, but in areas with a large customer base there was an opportunity for substantial sales to offset the initial investment. In contrast, the high build-out costs and low density of population meant that these same carriers had little incentive to service rural America.
- Third, the major carriers took a "walled garden" approach to the use of their allocated spectrum. If a consumer wanted to use AT&T's spectrum, for example, she had to purchase her phone from AT&T. No outside devices were allowed. Verizon limited access to its spectrum in a similar manner. This "walled garden" dulled the incentive for innovation and price competition in the creation of new mobile devices. AT&T and Verizon had little incentive to create devices or push down prices because they would only be competing with themselves. Similarly, outside

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<sup>4</sup> For example, the FCC's 2013 report on mobile communications competition shows a weighted average of Herfindahl-Hirschman Indices of 2873. Anything above 2500 is considered "Highly Concentrated" for antitrust purposes. (This high concentration in the mobile communications market is the reason that in 2011 the Department of Justice sued to block AT&T's purchase of T-Mobile.) This causes prices to be too high, leading to a "have" and "have not" cellphone culture in America, promoting inequality in such things as public education.

manufacturers had little incentive to create new devices when they knew those devices would have no market – even if they were better or cheaper – if AT&T and Verizon refused to open the gates.

62. As a result, as of 2010, more than 100 million Americans had no access to wireless broadband communications, making the U.S. only 15th worldwide in broadband coverage. As Julius Genachowski, the Chairman of the FCC appointed in 2009, summarized the situation: “The costs of this broadband gap are measured in jobs not created, existing job openings not filled, and our nation’s competitiveness not advanced.”

## **II. HARBINGER’S PLAN TO BUILD A NEW NATIONWIDE NETWORK.**

63. Harbinger saw an opportunity to build a new nationwide mobile communications network and use it to sell wireless connectivity on a wholesale-only basis. Under Harbinger’s plan, wireless connectivity would be sold to service providers, retailers, wireless operators, traditional wire-line carriers, cable operators, device manufacturers, and others, that, in turn, would sell these wireless services to their retail customers. As a result, dozens, even hundreds, of companies would be able to enter the wireless communications market, as retail wireless service providers, without having to build a network or to negotiate a commercially viable arrangement with an incumbent carrier, such as AT&T or Verizon. Device manufacturers, like Apple or Samsung, and retailers, such as Best Buy, would no longer need to direct their own customers to AT&T or Verizon for wireless service for devices. Instead, manufacturers and retailers could buy capacity on the Harbinger-sponsored network, on a wholesale basis, and then sell it on to their own customers as their own branded service. By opening its wireless network to any market participant that desired to provide retail wireless services, Harbinger’s plan promised to substantially increase competition for telecommunications services and



disrupt the status quo. For these reasons and others, the FCC found that Harbinger's plan provided a "significant public benefit."

64. Implementing Harbinger's plan required three basic accomplishments, all of which required substantial investment. Everyone in the industry, Defendants included, knew that these goals were essential if Harbinger was to deploy its network and recover its investment.

**A. First, Harbinger needed to know it could build an integrated satellite-terrestrial network using spectrum originally allocated solely to mobile satellite systems ("MSS").**

65. Building a new mobile communications network would be futile if there was not enough spectrum available to support the system. With the spectrum currently allocated to terrestrial broadcasts rapidly becoming over-utilized, this was precisely the situation in 2004-2009, when Harbinger first began exploring the possibility of building a new network and making increasing investments as a prelude to doing so.

66. One obvious solution was to convert the MSS spectrum previously allocated solely to satellite communications for use in an integrated satellite-terrestrial mobile network. The FCC gradually approved such a combined use of the MSS spectrum in a series of rulings in 2001-2005 and another in 2009, referring to the terrestrial aspect as the Ancillary Terrestrial Component ("ATC"). At each step, the FCC was required to and did give public notice, receive comments and objections, and publish final decisions. As discussed in more detail below, Defendants raised some objections, but only on limited issues, all of which were resolved in private agreements that were then submitted to the FCC.

**B. Second, Harbinger needed to know it could “coordinate” with others to consolidate assigned spectrum into broadbands.**

67. Harbinger’s plan also required that the non-contiguous frequency segments in the MSS spectrum could be “coordinated” into a “broadband.”

68. To accomplish this, SkyTerra’s rights to operate within the MSS band would have to be “coordinated” with the rights of another user within the MSS band to allow more robust use of the spectrum without creating “in-band” interference objections. As discussed in more detail below, this was eventually accomplished through a contractual agreement with ISAT (the “Coordination Agreement”) that committed Harbinger to pay hundreds of millions of dollars initially and billions over time.

**C. Third, Harbinger in the last step would spend billions to build a national network to use the spectrum.**

69. After Harbinger confirmed that the necessary spectrum was secured through FCC approval of increased terrestrial use and in-band coordination Harbinger could raise the many billions of dollars needed to build a new system of satellites and terrestrial broadcast stations that would rival those of AT&T and Verizon.

70. The new network would continue satellite transmissions but it was obvious to all from the outset that most transmissions had to be terrestrial. For one thing, the amount of traffic that satellites could handle was limited to the equivalent of about 20,000 phone calls at a time, but in 2010 the FCC required the new Harbinger network to handle all traffic from 260,000,000 Americans, including not just phone calls but more data intensive communications such as emails, movies, music, photographs, etc.

71. Specifically, in its order published March 26, 2010, the FCC required Harbinger to provide this robust terrestrial network: “[U]sing its terrestrial network, Harbinger proposes to provide service to at least 100 million people in the United States by the end of 2012 with an

increase to at least 260 million people in the United States by the end of 2015. The 4G mobile voice and data services available through Harbinger's broadband network would enable it to provide a service that complements and enhances competition in the provision of terrestrial wireless services provided by terrestrial carriers such as AT&T, Verizon Wireless, Sprint, T-Mobile, Clearwire, and others, particularly in the area of mobile broadband services." The FCC ordered this plan to be followed "without regard to satellite coverage." FCC notices, proceedings, comments and orders – all known to Defendants – were replete with language making this clear ("using its terrestrial network" and "without regard to satellite").

**III. DEFENDANTS KNEW YEARS AGO ALL MATERIAL FACTS WHICH TODAY THEY CLAIM MAKE IT IMPOSSIBLE FOR HARBINGER TO DEPLOY ITS NETWORK OR USE ITS SPECTRUM AS PREVIOUSLY AUTHORIZED.**

72. While the March 26, 2010 FCC order for the first time required the extensive use of terrestrial transmissions, this extensive use had been authorized in 2003, 2004, and 2005. In each year specified, Defendants had all the information they needed to know the full extent of what they claim today are insurmountable obstacles to deployment of the Harbinger-sponsored network. Each obstacle was clear from combining: (a) proprietary information known only to manufacturers of GPS devices, notably Defendants, and not to Harbinger, with (b) information disclosed by Harbinger, LightSquared, and their predecessors. Defendants not only failed to disclose the full truth about these matters, but affirmatively misrepresented the true state of affairs.

**A. Harbinger relied on Defendants to identify all of their interference concerns.**

73. Of necessity, Harbinger was relying on Defendants to identify the problems with their devices before it invested billions of dollars in the new network. This situation is illuminated by three facts.

74. First, essentially every change in private-sector use of electromagnetic spectrum (by a transmitter) must be approved by the FCC in a public proceeding.

75. Second, the FCC rules require the private-sector party seeking approval to disclose its plans in significant detail. For the Harbinger-sponsored network, all of this information was timely and fully disclosed by Harbinger (and SkyTerra) to the public on multiple occasions, including before the FCC hearings in 2001, 2003, 2004, 2005, 2009 and 2010. For example:

- In 2001, in an application for approval of a merger, two SkyTerra companies disclosed details regarding their proposed terrestrial use of the MSS spectrum, including, among other things, the power levels, antenna patterns, and potential interference with GPS receivers and other devices (as shown by test results).
- In 2003, to obtain authority to operate terrestrial stations in MSS frequencies, SkyTerra disclosed substantial detail about those stations, including their signal power, size, and number.
- In 2009, in the requests that led to the March 2010 merger, Harbinger and SkyTerra disclosed the number of base stations they planned to operate (36,000), the power levels at which they would operate, and that the terrestrial stations, “without regard to satellite coverage,” had to reach 100 million Americans by 2012 and 260 million by 2015. As noted, anyone in the industry had to know this required almost all transmissions to be terrestrial and extensive use of terrestrial base station transmitters.

Defendants were thus fully and repeatedly informed of all material transmitter information which, combined with their proprietary knowledge about the operation of their own products, was all they needed to know to perceive all objections they later raised.

76. Third, in contrast to Harbinger’s obligation to disclose substantial technical detail about its proposed network, the FCC does not require GPS manufacturers to reveal proprietary details about their products since, other than unrelated product certifications, the FCC does not

regulate receivers. According to FCC officials who later testified before Congress, the FCC and interested parties necessarily rely on receiver manufacturers like Defendants to disclose all information necessary to protect Defendants' interests. Thus, Mindel De La Torre, Chief of the FCC International Bureau, and Julius Knapp, the Chief of the FCC's Office of Engineering and Technology, stated jointly to Congress: in "any proceeding before the Commission that has a potential for spectrum interference with nearby spectrum users, the FCC relies on licensees and stakeholders to raise interference concerns to ensure the timely resolution of such complaints."

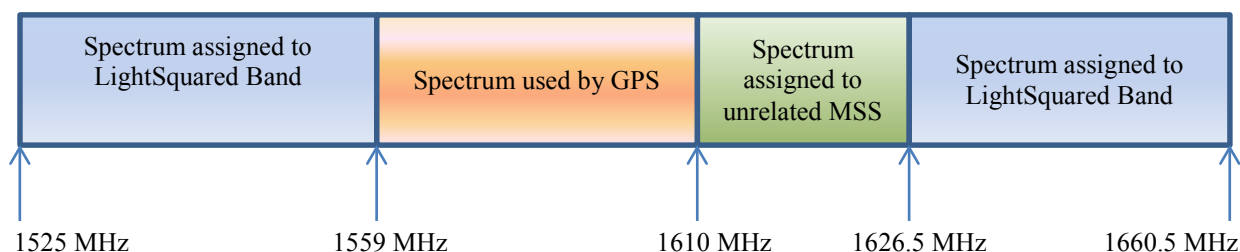
77. Knapp and De La Torre explained how, according to the FCC, this process should have worked in the context of the instant GPS issues: "the Commission relies on receiver manufacturers and service providers to report interference issues because they are best positioned to understand the parameters and limitations of their own equipment. The Commission does not possess the technical specifications for the hundreds of types of GPS devices utilized by commercial users, government contractors, and government entities." Moreover, "manufacturers and service providers have the relevant information, and they also have the incentive to notify the Commission of the potential for receiver overload so as to avoid problems with their services and products."

78. Thus, while Defendants knew that Harbinger was relying on their representations about their products when it invested billions in the new network, when it came to "the technical specifications for the hundreds of types of GPS devices," Harbinger and its related companies were in the dark, as Defendants well knew. If some non-public feature of a receiver made it susceptible to certain interference from a transmitter operating in neighboring spectrum, Harbinger had no way of knowing that and had to rely on Defendants to disclose that fact.

**B. Defendants' current objections are not that the Harbinger-sponsored network is broadcasting signals out of its authorized band (OOBE interference), but rather that GPS receivers are "listening in" on Harbinger signals outside of the band assigned to GPS (OOBR or "overload" interference).**

79. To fully understand the context in which Defendants concealed and misrepresented their current objections, it is necessary to understand both the similarities and the differences between the objections they belatedly disclosed (regarding OOBR or overload interference) and those they raised (and which were resolved) during the prior decade (regarding OOBE interference). The issues, though distinct, are related.

80. As can be seen in the simplified spectrum graphs, the LightSquared Band is either directly adjacent to (lower LightSquared Band) or near to (upper LightSquared Band) the spectrum allocated for GPS purposes:



81. Before 2001, it was well-recognized by engineers and those in the wireless business that two types of interference problems can arise when different parties use adjacent or nearby bandwidths: interference from Out-of-Band Emissions (OOBE) and interference from Out-of-Band Receptions (OOBR).

82. OOBE occurs when a transmitter working in one band of spectrum transmits outside of its allocated spectrum into a neighboring band of spectrum. This is the "interference" discussed in paragraphs 45-52 above. As explained there, OOBE is inevitable to some degree since each signal transmission forms a bell-curve that extends to infinity in each

direction. The issue is not completely eliminating interference, which is impossible, but reducing it so the signal/noise (“S/N”) ratio makes each spectrum usable for authorized uses.

83. The FCC typically makes it the responsibility of the party sending the signal, *i.e.*, the transmitting satellite or base station, to minimize OOBE so it does not disrupt nearby users.

84. In contrast, if the problem involves OOB<sub>R</sub>, then the cause is not that the transmitted signal is straying outside of its assigned bandwidth. Instead, the cause is that the receiver of the signal is not limiting its reception to its assigned bandwidth. In other words, OOB<sub>R</sub> has nothing to do with the transmission of a signal outside its designated limits. To the contrary, the OOB<sub>R</sub> issue arises when one party’s receiver “listens in” to another party’s spectrum and the receiver is “overloaded” by the authorized signal in that band.

85. This overload is not inevitable. It can be avoided by filters and other technical fixes. Indeed, since at least 1965 the FCC has recognized that receivers can and should be constructed in a manner that does not rely on operations outside their authorized bandwidth unless those receivers are designed to not be overwhelmed by authorized in-band use. In other words, the FCC has recognized OOB<sub>R</sub> as a “receiver design problem,” and allows receivers to “listen into” other bands only if they can accept all within-band interference that could result from authorized use by the licensees of the band.

86. The objections that Defendants used in 2012 to shut down the Harbinger-sponsored network are related only to OOB<sub>R</sub> and not related to OOBE. As discussed below, Defendants reached multiple agreements with Harbinger and its predecessors between 2002 and 2009 to solve all disclosed OOBE issues. Indeed, Defendants publicly stated that Harbinger’s predecessor “should be commended” for being such a “good spectrum neighbor” by agreeing to substantially more stringent OOBE controls than the FCC required of other

transmitters. Harbinger and its predecessors met these enhanced obligations, at great expense to themselves.

87. Extensive recent testing has confirmed that the Harbinger-sponsored network is in full compliance with the stringent OOB limits applicable only to it. For example, on September 15, 2011, Anthony J. Russo, the Director of a governmental working group, the National Coordination Office for Space-based Positioning, Navigation and Timing, testified to Congress that: “Our tests showed no evidence of out-of-band emissions. In other words, we were able to confirm LightSquared’s claim they correctly filter their transmission so that it is not leaking into the GPS band.”

88. To the contrary, all of Defendants’ belated objections – and the sole reason that the Harbinger-sponsored network has been shut down – are that the Defendants’ GPS products were designed to rely on OOB. In other words, Defendants are now objecting to the Harbinger-sponsored network because they designed their products to “listen in” to the spectrum that the FCC assigned to the Harbinger network even though Defendants themselves have no right to use that spectrum. As FCC officials Knapp and De La Torre put it in their testimony before the U.S. House of Representatives: “In effect, we discovered that some GPS legacy equipment effectively treats the GPS spectrum and the L-Band spectrum [LightSquared’s spectrum] as one band.”

89. Bureau Chief De La Torre used a plain-language analogy to explain the situation, writing the following:

“Let me explain the situation in the most elementary and visual way that I can without a picture. The FCC authorizes various operators to provide service by using spectrum or radiowaves. In order to make sure that there is no interference, we assign specific frequencies to particular licensees. In this case, think of it as a three lane highway. The FCC has authorized LightSquared – a satellite system that also has a terrestrial component – to use the left lane. The middle lane is where GPS is authorized to



operate, and the right hand lane is where another satellite operator (Globalstar) has its services. Notice that I say that GPS is authorized to operate in the middle lane – however, it has not been staying in its lane. It has been driving in the left lane with impunity – remember this is LightSquared’s lane – but now that it looks like the left hand lane might actually have traffic in it, the GPS community is yelling bloody murder (literally). The GPS community is not worried about LightSquared driving in the GPS middle lane, but that LightSquared will interfere with the GPS signals that are leaking into LightSquared’s left lane. The GPS community has been on notice since 2003 that the predecessor to LightSquared was planning on providing terrestrial service in the left traffic lane – which would mean there would be more traffic in the lane. However, the GPS community continued to build receivers that they knew were susceptible to interference (remember that they are driving in the wrong lane) because it was cheaper to do so and they decided to accept the business risk of doing so. In a nutshell, the GPS community feels that they should be able to drive their double-wide trailer down the middle lane and left lanes without regard to LightSquared’s longstanding right to be in the left lane.”

90. As has only recently become clear, the reason Defendants have their present OOB problem is the deliberate choice they made over the past eight years to manufacture and sell receivers that can only function if they can listen within the LightSquared Band and that cannot function if LightSquared uses its band as authorized in 2003, 2004, 2005, 2009 and March 2010.

**C. Defendants knew about the exact OOB issue they now raise long before Harbinger invested billions to buy and build out licensed spectrum.**

91. Defendants have been driving in the wrong lane for years and had known they were doing so since they deliberately designed their products to do so. Despite knowing that they had designed their products to operate in spectrum that (a) was not authorized for GPS uses and (b) had been specifically authorized for integrated satellite-terrestrial use since 2003, Defendants chose not to disclose material facts about the situation until after Harbinger made its March 2010 investment.

92. Defendants’ first step towards revealing the truth about how they had designed their products came in an objection that USGPSIC filed in an FCC proceeding on September 15, 2010. This proceeding was not specific to LightSquared and the filing did not state the full

magnitude of the OOB problem as Defendants described it later. All that filing stated was that “three decades of evolving GPS receiver design” had “relied” on the FCC not allowing extensive terrestrial use of the LightSquared Band. The filing also stated: “From the point of view of a GPS receiver, the introduction of an adjacent-frequency broadband terrestrial service presents a threat of significant harmful interference.”<sup>5</sup>

93. These comments did not disclose any details of the “threat,” the fact the “threat” had been known to Defendants (but not Harbinger) for years, the fact that the “threat” would render inoperable hundreds of millions of GPS devices if LightSquared were to use the terrestrial authority previously granted, and that, as Defendants later claimed, the only feasible way to eliminate the “threat” was to destroy Harbinger’s investment.

94. Defendants’ entire story was not told until late 2011 and 2012, at which time it became clear that they had concealed the OOB problem from the beginning. For example, on August 22, 2011, Deere sent a letter to the FCC, forwarding a power-point Deere said it used in an August 18, 2011 presentation to the FCC (to which Harbinger was not a party). In that document, Deere finally admitted that OOB had been a problem “from the beginning.” The reason for the problem, Deere admitted, was that Deere’s receivers had been deliberately manufactured to operate on what Deere euphemistically called “wide-band” reception. That is, the receivers were designed to listen in on signals outside the GPS band and within the LightSquared Band. On September 15, 2011, Garmin and Trimble jointly submitted a similar letter to the FCC along with a similar power-point presentation. In their joint submission, Garmin and Trimble similarly revealed the fact that their “embedded base” of GPS products

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<sup>5</sup> Though it is not specifically relevant to the issue under discussion, these comments are factually inaccurate. As noted above, extensive terrestrial use of the MSS spectrum had been authorized since 2003. The GPS industry therefore could not have reasonably “relied” on the perpetual absence of terrestrial transmissions when designing its receivers.

(i.e., the products they had sold long ago) could not function without “full-band” reception. Had Defendants put it bluntly, they would have said they deliberately manufactured their receivers to require OOB, a design that would not work if the LightSquared Band was used as planned by Harbinger and as authorized by the FCC since before 2005.

95. In its August 22, 2011 letter, Deere also stated that “1 dB of loss” in the “signal to noise ratio . . . should be considered the appropriate interference threshold for GPS receivers.” Garmin and Trimble also adopted this position in their September 15, 2011 letter. These statements are significant for at least two reasons. First, they are referring to “signal to noise ratio” within LightSquared’s Band, yet they are identifying GPS transmission as the “signal” and LightSquared’s transmission as the “noise.” In other words, Defendants were admitting that for their receivers to function they had to be treated as the primary users in the LightSquared Band while the authorized users (i.e., the Harbinger-sponsored network) had to be treated as “noise.” Second, the Defendants’ proposed “1dB of loss” standard is an extraordinarily low threshold of interference for the issue in question (such a standard had been used on only one prior occasion for a completely different type of problem). If such a threshold were used, it would represent an unprecedented level of restriction on band licensees operating within their own spectrum to protect adjacent band users “listening in” without authorization.

**IV. AT NUMEROUS TIMES BETWEEN 2001 AND MARCH 2010, DEFENDANTS SHOULD HAVE DISCLOSED MATERIAL FACTS ABOUT OOB INTERFERENCE, BUT THEY INSTEAD CONCEALED OR MISREPRESENTED THOSE FACTS.**

96. At no point during the three main phases of activity that lead to Harbinger’s investment in the new network – the 2001-2005 FCC approvals of the integrated satellite-terrestrial usage of the MSS spectrum, the 2006-2009 efforts to coordinate the MSS spectrum,

and the 2009-2011 merger and build-out expenditure – did Defendants ever raise the OOB objections that they raise today. In his September 2012 statements before Congress, FCC Chief Engineer Knapp summed up Defendants’ failure to disclose the situation as follows: “During the decade preceding late 2010, the GPS industry had numerous opportunities – detailed below – to inform the [FCC] of the receiver overload interference issue ultimately raised in 2010. Despite participating in multiple proceedings, and raising other interference issues that were ultimately resolved to the GPS industry’s satisfaction, it did not [make such disclosure]. . . . In this instance – unlike any other that I can recall in my decades at the FCC – the GPS industry did not do so until very late in the proceeding.”

97. Just as Defendants did not disclose the issue to the FCC, they did not disclose the issue to Harbinger before it invested billions in the new network.

**A. 2001-2005: Defendants’ conduct while the FCC repeatedly approved increasingly extensive terrestrial use of MSS spectrum.**

98. In early 2001, the FCC conducted proceedings regarding SkyTerra predecessor Motient Services, Inc. (“Motient”).

99. Motient sought to combine satellite operations with Canadian MSS provider TMI Communications (“TMI”). Both were authorized to broadcast in the MSS spectrum. They sought to create a new combined company, MSV. Concurrently with its application for approval of this transaction, Motient also requested FCC permission to use the MSS spectrum to broadcast from not just satellite transmitters but also from terrestrial transmitters as part of one integrated system.

100. The FCC approved the Motient-TMI merger, but did not immediately rule on Motient’s request to permit terrestrial transmissions. Instead, the FCC initiated a separate rulemaking proceeding as “the most appropriate method for addressing” this more generally

significant issue. On August 17, 2001, the FCC released a Notice of Proposed Rulemaking entitled “Flexibility for Delivery of Communications by MSS Providers.” For the remainder of this Complaint, Harbinger will refer to this as the “2001 Rulemaking Proceeding” (although, as will be seen, it was not concluded until 2003).

101. Following standard procedure, the FCC invited comment from interested parties. SkyTerra predecessor MSV, the company formed by the merger of Motient and TMI, actively participated. So did Defendants, in part through the industry group that they controlled: Defendant U.S. GPS Industry Council (“USGPSIC”).

102. Specifically, Defendants objected to MSV’s applications based on concerns regarding OOBE. In response to the OOBE objections, SkyTerra predecessors worked directly with Defendants over many months to reach a solution. In those detailed negotiations, which occurred outside the FCC proceedings, Defendants repeatedly represented that their only interference problems involved OOBE, not the OOB-R interference that they complain about today.

103. In reliance on this conduct and these representations, SkyTerra predecessors voluntarily agreed to curtail outlying signals transmitted into GPS frequencies. SkyTerra predecessors invested over \$9 million in state-of-the-art filters to limit OOBE from SkyTerra band spectrum into GPS band spectrum. In the end, the limits were 1,000 times more restrictive than required by FCC regulations for other adjacent MSS spectrum bands. SkyTerra predecessors made these investments to solve what were represented as all known GPS interference issues.

104. On July 17, 2002, MSV and USGPSIC signed a letter agreement that they then presented to the FCC (the “2002 OOB Agreement”). In the 2002 OOB Agreement, SkyTerra predecessor MSV and USGPSIC represented that they:

- “Have agreed on specific out of band emission (‘OOB’) limits in the entire GPS band for the ancillary terrestrial component (‘ATC’) base stations and terminals that MSV will deploy in connection with its proposed next-generation Mobile Satellite Service system as described in the attached document.”
- “These OOB limits are intended to protect GPS receivers.”
- “This increase in protection is to account for a greater density of users and the need to protect GPS receivers from the aggregation of interference from multiple sources.”
- “These OOB limits are appropriate considering that MSS services, technical characteristics, operational interference scenarios, and expected density are published and understood. MSV’s proposed terrestrial augmentations are also well known.”

105. MSV and USGPSIC thereafter jointly urged the FCC to adopt these mutually agreed upon OOB limits.

106. In response, on January 29, 2003, the FCC issued an order allowing combined terrestrial-satellite use of the MSS spectrum, effectively granting MSV’s request in the 2001 Rulemaking Proceeding. For the remainder of the Complaint, Harbinger will refer to this order as the “2003 Order.”

107. Defendants asked the FCC to apply the same standards to others in the MSS spectrum. The FCC refused, finding the restrictions in the 2002 OOB Agreement too stringent. The FCC explained that it imposed these strictures on MSV only because MSV had agreed to them.

108. Before imposing any limits on others, the FCC sought input from all interested parties, including Defendants. Specifically, the 2003 Order called on “all stakeholders to assist in the examination of what changes in the level of protection for GPS, if any, should be established in the future.”

109. Defendants provided the requested further input. However, they again made no mention of OOB issues. Instead, Defendants continued to discuss OOBE as if that were the only concern.

110. For example, in July 2003, USGPSIC filed a petition for reconsideration asking the FCC to adopt for all MSS operators the more restrictive limits agreed to in the 2002 OOBE Agreement. In that petition, USGPSIC stated that “MSV and the U.S. GPS Industry Council considered all relevant issues concerning potential interference to GPS, conducted the necessary analyses to determine feasible OOBE limits, and presented the Commission with their best thinking on what is appropriate under these circumstances.”

111. In September 2003, USGPSIC submitted to the FCC a letter which began by acknowledging that “the increased user density from potentially millions of MSS mobile terminals operating in ATC mode [*i.e.*, on the terrestrial network] will transfer back to potentially tens of thousands of ATC [*i.e.*, terrestrial] wireless base stations...” (The “T” in “ATC” is for “terrestrial.”) USGPSIC then referred to MSV as a “good spectrum neighbor” that through “careful industry negotiations” had helped find a solution to a “unique, and particularly harmful, interference case for GPS.”

112. With MSS providers now allowed to extensively use high-powered terrestrial transmitters in the spectrum previously reserved solely for satellite transmission, MSV next

took steps to utilize the 2003 Order. In November 2003, MSV filed FCC applications seeking authority to operate a large number of terrestrial stations transmitting on the MSS spectrum.

113. Though invited to raise objections to this request, Defendants did not. Instead, on March 24, 2004, USGPSIC sent a letter to the FCC asking the Commission to grant MSV's applications. USGPSIC affirmatively represented that MSV had resolved all GPS interference issues regarding the combined terrestrial-satellite use of the MSS spectrum. Specifically, the letter stated "MSV is to be commended for its proposal to use its spectrum in a responsible manner that ensures the continued utility of GPS receivers operating in the vicinity of MSV ATC stations. The major issues raised in its application have been before the Commission and fully briefed since at least mid-2003 and, in many cases, far longer."

114. On November 8, 2004, the FCC authorized the requested ATC (that is, terrestrial) operation by MSV. This will be referred to as the "2004 Order." As FCC officials Knapp and De La Torre in 2012 summarized this for Congress: "In 2004, the International Bureau, on delegated authority, applied the Commission's 2003 Order on ATC authorizations to permit [MSV] to offer an integrated MSS/ATC service to users equipped with dual-mode handsets. [MSV] was authorized to deploy a terrestrial network using the 1,725 base stations permitted under the Commission's then-existing rules. Once again, no parties raised the overload interference issue [what this complaint sometimes refers to as the OOB interference issue] in response to the grant of this authorization, and no parties filed a petition for reconsideration of the authorization." The 1,725 authorized base stations, if they had been activated in 2004, would have caused all of the OOB concerns that Defendants are now complaining about.



115. On February 25, 2005, the FCC entered a further order establishing at least three points pertinent to Defendants' current objections:

- First, the FCC again denied GPS's request for general application of the more stringent limits set forth in the 2002 OOB Agreement. In doing so, the FCC specifically noted that "...we do not regulate the susceptibility of receivers to interference from transmissions on nearby frequencies. Rather, we rely on the marketplace – manufacturers and service providers . . . . In addition, we generally do not limit one party's ability to use the spectrum based on another party's choice regarding receiver susceptibility."
- Second, the FCC removed earlier limits on the number of terrestrial base stations that an operator could use to broadcast in the MSS spectrum. As Knapp and De La Torre explained to Congress: "The new rules removed the limitation on the number of terrestrial base stations (1,725) so long as operations met certain technical parameters. . . . The Commission received no reports or complaints of potential overload interference following the release of this order – which had explicitly lifted the base station limit."
- Third, the FCC flatly rejected a proposal to limit transmissions to primarily satellite, using terrestrial only as a last resort. Instead, the FCC found that "requiring satellite-first routing would defeat most of the benefits of authorizing ATC in the first instance," and it characterized the proposal for a satellite-first requirement as "artificial and spectrally inefficient."

116. For the remainder of the Complaint, Harbinger will refer to this order as the "2005 Order."

117. In summary, in the four years between first quarter 2001 and first quarter 2005, there were extensive and essentially continuous proceedings before the FCC as well as private negotiations and agreements between Defendants and Harbinger predecessors, all of which resulted in the approval of extensive integrated satellite-terrestrial transmission over MSS spectrum previously approved only for satellite transmissions. Throughout these four years,

Defendants represented that they had considered all potential interference issues and that all such issues had been resolved.

118. SkyTerra and Harbinger relied on Defendants' statements, omissions, and conduct – both before the FCC and in private negotiations and representations – in all decisions, investments, and actions, detailed below.

**B. 2006-2009: Defendants' conduct while SkyTerra and Harbinger spent large sums to coordinate the MSS spectrum.**

119. With the MSS spectrum approved for combined terrestrial-satellite use, the next step necessary to build out a functioning network was “coordination” of the MSS spectrum.

120. As noted in paragraphs 38-41 above, although the MSS spectrum had initially been assigned as a common band and used cooperatively by multiple entities, as technology developed this arrangement became inadequate. This assignment meant that for the MSS spectrum to be adjusted for broadband use, the various assignees had to be aligned or “coordinated.”

121. SkyTerra and later Harbinger pursued this plan through 2009, making significant investments in several companies. None of these investments would have been made had Defendants disclosed the whole truth about the interference problems they only fully revealed in late 2011 and 2012.

122. Harbinger invested in SkyTerra, successor of Motient and MSV, the main entities involved in the 2003 Order and the 2005 Order. This was the group of entities that Harbinger eventually owned, reorganized, and renamed LightSquared as a result of actions in March 2010. SkyTerra had licensed authority to operate in the MSS spectrum located at 1525-1544 MHz, 1545-1559 MHz, 1626.5-1645.5 MHz, and 1646.5-1660.5 MHz (now the “LightSquared Band”).

123. Harbinger made its first investment on December 23, 2004, purchasing 2,052,495 shares of SkyTerra at a total cost of \$28,360,292. Harbinger made this investment only weeks after the FCC issued its November 8, 2004 Order authorizing MSV (SkyTerra's predecessor) to transmit terrestrial signals in the LightSquared Band. As discussed in paragraphs 113-114 above, the FCC issued this Order at Defendants' urging and only after Defendants had represented that all of their interference concerns had been resolved. In making this investment, Harbinger relied on what Defendants had said, omitted to say, and did to that point.

124. Over the next several years, Harbinger increased its investment in SkyTerra. During this time period, the FCC continued to issue orders establishing authority to use the LightSquared Band for terrestrial-satellite purposes (*e.g.*, the 2005 Order) and the Defendants continued, through affirmative statements and through omissions, to represent that they did not have any objections related OOB interference. Harbinger relied on what Defendants said, omitted to say, and did at the point when Harbinger made each of its subsequent investments in SkyTerra. In the language of SkyTerra's SEC filings, these investments included the following:

- "As of March 28, 2006, the [Harbinger] Master Fund was a minority stockholder in SkyTerra, owning approximately 2,117,800 shares of Capital Stock."
- "Subsequently, on July 28, 2006, Harbinger increased its equity ownership in SkyTerra to 3,230,048 shares of Capital Stock through the purchase of 891,363 shares of Capital Stock at \$18 per share as part of a stockholder rights offering made to all SkyTerra stockholders."
- "As of October 13, 2006, the [Harbinger] Master Fund, together with the [Harbinger] Special Fund had acquired another 2,703,214 shares of Capital Stock at prices ranging from \$12.95-13.15 per share."

- “On February 4, 2008, Harbinger Capital Partners Fund I, L.P., an affiliate of Harbinger, purchased 14,407,343 shares of Non—Voting Common Stock of SkyTerra . . . .”
- “On April 7, 2008, Harbinger entered into an agreement with Apollo Investment Fund IV, L.P., Apollo Overseas Partners IV, L.P., AIF IV/RRRR LLC, AP/RM Acquisition LLC and ST/RRRR LLC (which we refer to, collectively, as "Apollo") pursuant to which Harbinger, on April 9, 2008, purchased from Apollo 10,224,532 shares of Common Stock (of which 442,825 shares were placed in escrow pending receipt of the FCC Consent relating to Harbinger's application to acquire control of SkyTerra) and 6,173,597 shares of Non—Voting Common Stock for, in the aggregate, approximately \$164 million (\$10 per share). Additionally, Harbinger purchased all Series IA warrants of SkyTerra held by Apollo representing the right to purchase up to 679,922 shares with an exercise price of \$20.39 per share and all Series 2A warrants of SkyTerra held by Apollo representing the right to purchase up to 2,689,734 shares with an exercise price of \$25.85 per share.”
- On September 12, 2008, “Purchase of 23.6 Million Shares of SkyTerra Common Stock and Non—Voting Common Stock . . . .”
- “During January and February 2009, Harbinger purchased an aggregate 1,634,708 shares of Common Stock in open market transactions at purchase prices ranging from \$1.43 to \$4.69 per share.”

125. Also in such reliance on Defendants’ statements, omissions, and conduct, Harbinger provided debt financing to SkyTerra. A summary of these transactions, to quote from SkyTerra SEC filings, is as follows:

- “In March 2006, the Master Fund also acquired from the underwriters \$60 million aggregate principal amount of bonds in a \$750 million offering of SkyTerra LP Senior Secured Notes ("Senior Secured Notes").”
- “On December 15, 2007, Harbinger entered into a Securities Purchase Agreement (the "2007 SPA") with SkyTerra LP and Mobile Satellite Ventures Finance Co., which was subsequently renamed SkyTerra Finance Co. and is now a wholly owned subsidiary of SkyTerra, pursuant to which Harbinger agreed to purchase \$150 million of SkyTerra LP's 16.5% Senior Unsecured Notes due 2013 and ten year warrants to

purchase 9,144,038 shares of SkyTerra's Capital Stock, with an exercise price of \$10.00 per share. The terms of the warrants permit Harbinger to elect to receive shares of Common Stock, Non-Voting Common Stock or any combination thereof. Harbinger was also granted the right of first negotiation to discuss the purchase of additional equity securities from SkyTerra prior to SkyTerra's negotiation with a third party. If SkyTerra and Harbinger did not agree on the terms for such a transaction, Harbinger had the right to maintain its percentage ownership interest through pro rata purchases of shares in issuances to third parties. Such right expires once Harbinger and their affiliates beneficially own less than five percent (5%) of the outstanding Capital Stock of SkyTerra or, if earlier, on December 31, 2011. The transactions contemplated by the 2007 SPA closed on January 7, 2008.”

- “On January 7, 2008, Harbinger Capital Partners Master Fund I, Ltd., and Harbinger Capital Partners Special Situations Fund L.P. (together Harbinger), purchased \$150 million of SkyTerra LP’s 16.5% Senior Unsecured Notes due 2013 and ten-year warrants to purchase 9.1 million shares of the Company’s common stock, with an exercise price of \$10 per share. The 16.5% Senior Unsecured Notes bear interest at a rate of 16.5%, payable in cash or in-kind, at SkyTerra LP’s option through December 15, 2011, and thereafter payable in cash. The 16.5% Senior Unsecured Notes mature on May 1, 2013.”
- “The indenture governing the Senior Secured Notes of SkyTerra LP and SkyTerra Finance Co., the note issuers, required the note issuers to offer to repurchase the Senior Secured Notes following a change of control (as defined in the indenture for such notes). Effective April 2, 2008, the holders of a majority in aggregate principal amount at maturity of the Senior Secured Notes then outstanding signed letters to waive compliance by the issuers and guarantors of such notes with any provisions of the indenture that would, but for such waivers, require the note issuers to offer to repurchase or to repurchase any of the Senior Secured Notes due to a change of control caused by the acquisition of beneficial ownership of Common Stock or Non-Voting Common Stock by Harbinger or any of its affiliates.”
- “On January 7, 2009 the Company issued the first of four issuances of the 18% Senior Unsecured Notes in an aggregate principal amount of \$150 million. The remaining \$350 million of 18% Senior Unsecured Notes are scheduled to be issued in three tranches of \$175 million, \$75

million and \$100 million on April 1, 2009, July 1, 2009, and January 4, 2010, respectively.” Harbinger receives warrants for 7.5 million shares from SkyTerra.

- “On January 7, 2009, after extensive negotiations and in order to provide SkyTerra with greater certainty that Harbinger would purchase the 2009 Notes and in light of the significant deterioration in market conditions, SkyTerra, SkyTerra LP and Harbinger agreed to amend the SPA related to the 2009 Notes to (i) increase the interest rate on the 2009 Notes from 16.0% to 18.0% and (ii) increase the number of warrants to be issued in connection with the issuance of the 2009 Notes from 25 million to 32.5 million.”
- “[T]he second tranche of \$175 million of 2009 Notes was issued to Harbinger on April 1, 2009 accompanied by the issuance of 21.25 million warrants with an exercise price of \$0.01”
- “[T]he third tranche of \$75 million of 2009 Notes was issued to Harbinger on July 1, 2009.”

126. As a result, by 2009 Harbinger had become SkyTerra’s single largest shareholder and creditor.

127. At the same time, Harbinger also made substantial investments in ISAT, which, as discussed in paragraph 39 above, also had licensed authority to operate in the same MSS spectrum that is now the LightSquared Band. ISAT was using the band to provide satellite communications services principally to ocean-going vessels and planes.

128. Through 2006 and 2008, Harbinger acquired more than 132 million shares of ISAT. This represented a 28% ownership, making Harbinger the company’s largest shareholder.

129. After Harbinger made these strategic investments, the two companies entered into a Coordination Agreement. This agreement, executed December 20, 2007, required SkyTerra and ISAT to coordinate their spectrum in a manner that would make it possible for

LightSquared to provide broadband service terrestrially (rather than just minimizing interference for their individual uses as they had done before).

130. In return for ISAT's agreement to enter into this Coordination Agreement, Harbinger agreed to make additional investments into the SkyTerra entities to fund payments to ISAT.

131. The end result was that contiguous blocks of MSS spectrum were now "coordinated" into a combined "broadband" with enough carrying capacity to support Harbinger's planned network.

132. The relevant details of all of these transactions were publicly disclosed, including to Defendants. Nonetheless, throughout this process the Defendants deliberately concealed information about the OOB interference issues they are belatedly raising now.

**C. 2009-2010: Defendants' conduct while Harbinger acquired SkyTerra, agreed to the FCC's build-out requirements, formed LightSquared, and began to build the new mobile network.**

133. In March and April 2009, Harbinger and SkyTerra filed two concurrent applications with the FCC.

134. On March 26, 2009, Harbinger applied for permission to acquire full ownership of SkyTerra. At this time, SkyTerra was a publicly-traded company with a large number of outstanding shares not owned by Harbinger. Before Harbinger invested in the anticipated massive build-out process, Harbinger intended to purchase all outstanding shares and take the company private so that Harbinger could then contribute SkyTerra assets to a new entity. (Eventually this resulted in the creation of the company known as LightSquared.) Because SkyTerra was the holder of the FCC licenses for the MSS spectrum, and because Harbinger's acquisition of all the outstanding shares of SkyTerra would result in those licenses being transferred to Harbinger's control, this share buyout had to be approved by the FCC.

135. On April 29, 2009, as a required condition of Harbinger's share buyout, SkyTerra filed for a modification to the terrestrial component of its MSS spectrum license to allow the anticipated Harbinger network to take full advantage of the Coordination Agreement with ISAT. To implement the Coordination Agreement, the FCC had to approve certain operating parameters, including transmission power levels.

136. Defendants were invited to make objections and did so. As usual, their objections related solely to OOBE. They did not make the OOBRE objections they are making now.

137. Because Defendants had already agreed with SkyTerra's predecessor to the OOBE limits memorialized in the 2002 OOBE Agreement, Defendants' objections to the 2009 applications were quite limited. On July 10, 2009, Defendants, through the USGPSIC, filed comments with the FCC expressing concern about OOBE caused by newly invented "indoor" transmitters (i.e., tiny indoor base stations that send indoor signals to indoor users). Defendants' new objections involved only this very narrow issue and were entirely resolved, as had occurred in 2002, by private agreement that was then submitted to the FCC.

138. Before discussing the 2009 agreement in detail, for context we discuss separate simultaneous ITU negotiations where the question of OOBRE specifically arose, and was discussed by SkyTerra, Defendants, many U.S. government agencies, other governments, and many others.

139. These negotiations occurred within an ITU working group and the associated preparatory U.S. working group. The ITU is a United Nations specialized agency that helps coordinate use of spectrum internationally. Defendants regularly participated in this and other



ITU working groups from at least 2005. By the time of its 2009 applications, a representative retained by both SkyTerra and Harbinger was also participating in the relevant working group.

140. In July 2009, the month the Defendants filed their “indoor” OOB objections with the FCC, the U.S. working group was negotiating a set of radio recommendations to the ITU working group that would eventually be entitled “Characteristics and protection criteria for receiving earth stations in the radionavigation-satellite service (space-to-earth) and receivers in the aeronautical radionavigation service operating in the band 1,559-1,610 MHz.” The spectrum noted in the title – 1,559-1,610 MHz – is the band allocated for RNSS use, a portion of which is assigned to GPS.

141. Since SkyTerra did not operate in the RNSS band, it was not literally covered by the title or rule. However, the issue of OOB interference was discussed in these negotiations, and at several points, including on July 15, 2009, the individual retained by both SkyTerra and Harbinger specifically asked the Defendants’ representative to provide information to address any concerns regarding the potential for the GPS receivers to experience OOB as a result of transmissions from the LightSquared Band. While Defendants never raised any such OOB concerns regarding LightSquared, they did raise OOB concerns regarding other entities. As an initial matter, the Defendants raised the potential of its receivers experiencing “in-band” overload interference as a result of transmissions from other operators within the RNSS band (*i.e.*, not from the LightSquared Band).

142. Separately, Defendants also raised OOB concerns related to other proposed adjacent band aeronautical services regarding a completely separate GPS band (1,164 to 1,300 MHz) that has nothing to do with the LightSquared Band.

143. These two essentially simultaneous developments show that in 2009 and early 2010 Defendants were keenly aware of the potential for OOB with respect to its GPS and RNSS receivers. At this time, they chose not to raise the issue with respect to Harbinger's new nationwide network, in which, as they knew, Harbinger was about to invest billions.

144. While these matters simultaneously proceeded, Defendants made their "indoor" OOB objections to the FCC, noted in paragraphs 137-139 above, to which we now return. Upon hearing Defendants' "indoor" OOB objections, SkyTerra at once set to work finding a solution through private negotiations. As in 2002, the parties reached agreements solving the problems. These were memorialized in a letter agreement, that was then provided to the FCC on August 13, 2009 (the "2009 OOB Agreement"), which stated:

- The parties "have agreed on out of band emissions limits for the operation of low-power base stations with a maximum of EIRP of -4 dBW/MHz that are intended to be deployed indoors ("femtocells") and personal computer ("PC") data cards communicating with such base stations."
- "Specifically, SkyTerra will limit OOB for femtocells and data cards communicating with such femtocells to less than -114.7 dBW/MHz and -111.7 dBW/MHz in the 1559-1605 MHz band, respectively."
- "These limits are intended to reduce the potential for harmful interference to GPS receivers operating indoors, thereby addressing the concerns expressed by the [USGPSIC] Council in its comments regarding the ATC Modification Application."

145. With all of the Defendants' stated objections now resolved, Harbinger began the negotiations with the FCC that culminated in its agreement to invest billions of dollars.

146. These negotiations began in about September of 2009 and focused on a basic issue: Harbinger's intentions in pursuing the acquisition. The FCC wanted assurances that Harbinger was not speculating, that is, planning to buy the SkyTerra spectrum and sell it to one of the two dominant companies, AT&T and Verizon, for a quick profit.

147. Through many meetings and other communications, Harbinger assured the FCC and negotiated an FCC commitment for spectrum use in return for a Harbinger commitment to build out the new network.

148. The build-out requirements were memorialized in the March 26, 2010 Order.

The terms most important to this litigation include the following:

- “Harbinger plans to develop a nationwide terrestrial broadband mobile 4G LTE network, which, without regard to satellite coverage, will provide wireless data on a nationwide basis.”
- “As planned, the network will consist of SkyTerra’s next generation satellites, approximately 36,000 terrestrial base stations, multi-frequency mode user handsets and other consumer devices, a terrestrial cell site and backhaul network, network operations centers, and the networks of other terrestrial carriers with which Harbinger plans to have roaming agreements.”
- “Without regard to satellite service, SkyTerra shall construct a terrestrial network to provide coverage to at least 100 million people in the United States by December 31, 2012; to at least 145 million people in the United States by December 31, 2013, and to at least 260 million people in the United States by December 31, 2015.”
- “Throughout its coverage area, SkyTerra’s terrestrial network must be interconnected with the public Internet and must provide, without regard to satellite connectivity, terrestrial service to mobile terminals or stations (e.g., handsets) operated by end users and by persons roaming on its system.”

As the emphasis illustrates, the build-out requirements clearly disclosed both the size of the planned network and the extent to which the network would rely on terrestrial broadcasts. In all events, as all in the industry well knew, satellites could not physically handle more than a small percentage of the contemplated usage – the equivalent of no more than 20,000 phone calls at a time. In other words, it was obvious that Harbinger could not comply with the FCC build-out requirements relying solely on satellite transmissions.

149. Defendants made no objection or comment. After the March 26, 2010 order was issued, AT&T and Verizon moved to reconsider (on unrelated grounds). Defendants did not.

150. The FCC agreed to a modification to the terrestrial component and to Harbinger's acquisition of SkyTerra. In return, Harbinger agreed to build out its network expeditiously and according to the specified parameters. Harbinger made this commitment and completed the SkyTerra merger in reliance on Defendants' continued representations, omissions, and conduct that communicated that all interference objections had been resolved – *e.g.*, the 2002 OOB Agreement, the July 2003 representation that they had already “considered all relevant issues concerning potential interference to GPS,” the 2009 OOB Agreement, the 2009 ITU negotiation, and all other matters heretofore stated.

151. The order approving the acquisition (the “Acquisition Order”) was specifically conditioned on Harbinger's fulfillment of the FCC's build-out requirements. The FCC found this network would confer a “significant public benefit.”

152. With the FCC's approval, and with Defendants raising no objections, Harbinger proceeded to acquire (by merger) all outstanding shares of SkyTerra on March 29, 2010. As a result of the merger and related transactions, Harbinger invested, in 2010, assets worth more than \$1.7 billion and, in 2011, assets worth more than another hundred million dollars for a total of almost \$1.9 billion.

153. Harbinger invested not only cash but: (a) its previous investments in SkyTerra, including shares and outstanding notes, (b) spectrum Harbinger ultimately owned, (c) its commitment to finance the Coordination Agreement with ISAT, and (d) its commitment to fund the required build-out.

154. After March 2010, Harbinger raised funds, began the build-out, and began entering into contracts needed for the new network. On July 20, 2010, LightSquared publicly announced a deal with Nokia Siemens Networks (“Nokia”) for assistance in the build-out process, providing more than 36,000 terrestrial base stations, and developing handsets, at a total cost of approximately \$8 billion dollars, financed by Harbinger and Nokia.

155. In August of 2010, LightSquared triggered “Phase 1” of the Coordination Agreements with ISAT, requiring an immediate \$409 million payment by LightSquared and a commitment to a \$138 million payment several months later.

156. By this point, it became clear to the public that Harbinger had been successful in raising all the money needed to bring together all pieces of its plan and that the new network, nearly a decade in the making, would soon be operating. It was only after this time that Defendants began to slowly reveal their undisclosed OOB issues which later stopped deployment of the new network.

**V. DEFENDANTS GRADUALLY AND BELATEDLY REVEALED THE FACTS ABOUT THEIR NEW OOB OR OVERLOAD INTERFERENCE OBJECTIONS.**

157. On September 15, 2010, Defendants for the first time opaquely began to disclose the OOB issues that ultimately stopped deployment of the Harbinger-sponsored network. This was nearly a decade after the FCC process began and six months after FCC approval of Harbinger’s plan, but less than two months after LightSquared announced that it had reached its \$8 billion deal with Nokia to finance the build-out of the new network and supply handsets, and a month after LightSquared triggered the ISAT Coordination Agreement and obligated itself to pay \$700 million.

158. Defendants provided the description in a proceeding that did not involve LightSquared or Harbinger, proceedings as to those companies having ended months earlier.

The description was provided in a proceeding the FCC had commenced to consider general expansion of terrestrial use in the MSS band. The FCC had noted that the new proceeding was spurred in part by Harbinger's already-approved plan to "offer high-speed broadband services to consumers using terrestrial networks under their [Harbinger's and LightSquared's] ATC authority."

159. In that proceeding, Defendants did not ask the FCC to stop the Harbinger build-out or to limit creation of other similar networks. Defendants only asked for the preservation of existing OOB limits and mitigation measures relating generally to "interference."

160. September 15, 2010 came shortly after Harbinger announced developments that showed its planned network would likely succeed. The Nokia deal, financing, customer contracts, the triggering of the ISAT contract, and other events all contributed to the perception (and reality) that Harbinger was about to succeed. The sudden introduction of Defendants' objections, the increasingly dishonest and venomous way in which they were made over the next year, and Defendants' all-out campaign in Congress, federal agencies, and the press leaves little doubt that once Harbinger's success became a realistic prospect, Defendants realized they had to stop Harbinger, even at the price of revealing Defendants' prior concealment of the extent to which their GPS receivers were vulnerable to OOB.

161. In the months following the Defendants' September 15, 2010 comments, Harbinger and LightSquared – still without full disclosure of Defendants' OOB problems, and still thinking any interference problem could be solved – continued to make significant progress towards completing the network. On November 14, 2010, they successfully launched the SkyTerra 1 satellite, and on December 14, 2010, they announced that Nokia had successfully used the network to place a data-intensive Skype call.

162. At the same time, LightSquared accumulated dozens of major retail partners. On November 18, 2010, in an effort to allow such retail partners as Best Buy more flexibility in the handsets that they could sell, LightSquared asked the FCC to reaffirm that LightSquared had permission to transmit to handsets that would use only the terrestrial-based signals (and ignore the satellite signal). The FCC soon granted this as a conditional “waiver” (the “Handset Waiver”).

163. The Handset Waiver was of minor importance and to Harbinger’s understanding simply confirmed authorization that Harbinger already believed it had. But Defendants seized on the Handset Waiver as a reason to begin to disclose concerns (long known internally, though not disclosed externally) that if the Harbinger network went live it would “completely preclude access to . . . all GPS signals in urban areas where LightSquared intends to roll out . . . .”

164. In an attempt to justify its failure to raise the OOB issue before, Defendants asserted that the Handset Waiver represented such a fundamental change in proposed use of the MSS spectrum that what had not been problematic suddenly became a huge problem.

165. Defendants’ assertion that the Handset Waiver prompted their concerns about OOB was knowingly false. In fact, Defendants raised the OOB issue, albeit unclearly, more than a month before LightSquared filed for the Handset Waiver and when Defendants could not have known that that Handset Waiver would be requested. *See* ¶ 157, above. Also, in its August 22, 2011 letter to the FCC, Deere admitted that OOB was a concern “from the beginning.” Deere asserted in great detail that GPS products had for years been predicated on the ability of GPS receivers to use adjacent bands in a way that no longer would be possible if the LightSquared Band was put to the full use authorized in 2003, *see* ¶106, above, and ¶¶ 171-174, below.

166. The Handset Waiver had nothing to do with the two network features that Deere now claimed “overloaded” the GPS receivers: 36,000 towers (even larger numbers had been effectively approved in 2005) or the volume of signal broadcasts (approved by 2004).

167. The Handset Waiver sought permission only to allow the use of handsets that did not receive both satellite and terrestrial signals. The FCC’s then-governing requirement was that communications networks on the MSS spectrum be capable of offering an “integrated service” that used both terrestrial and satellite broadcasts. LightSquared always intended to comply with the “integrated service” requirement by making full satellite coverage available to all users who wanted it. Indeed, it launched the billion-dollar SkyTerra-1 satellite only a few days before the filing of the Handset Waiver.

168. The purpose of the Handset Waiver was not to change LightSquared’s obligation to meet this integrated service requirement, but to clarify (for retailers and investors) what Harbinger had assumed was then the case anyway about the freedom of handset designers to receive only such signals as they wished.

169. On January 26, 2011, the FCC conditionally granted the waiver, holding that “the totality of the facts and circumstances” of Harbinger’s waiver request “collectively serve to promote the public interest . . . .”

170. The Handset Waiver allowed no relevant change to the network itself (relevant, that is, to transmitters or to features that could create OOB interference with GPS devices). As the LightSquared FCC request itself had made clear, traffic on the network, whether received through the satellite or terrestrial conduits, would be processed through the same integrated core network systems already approved. In other words, LightSquared would have



built exactly the same network with or without the Handset Waiver and it would have caused (or not caused) exactly the same OOB interference issues for Defendants.

171. In their later joint written statement to Congress, the FCC's Knapp and De La Torre identified at least six times before the Handset Waiver when Defendants could have made every OOB interference objection they make now, and indeed when such objections would have made much more sense than in response to the Handset Waiver:

- First, “in 2003, the Commission approved rules to permit MSS licensees to operate up to 1,725 ATC base stations to provide mobile service to areas where satellite signals are degraded or blocked (specifically urban areas and inside of buildings). The USGPSIC filed a petition for reconsideration . . . the receiver overload issue was not raised in opposition comments or in petitions for reconsideration or applications for review.”
- Second, “in 2004, the International Bureau, on delegated authority, applied the Commission’s 2003 Order on ATC authorizations to permit SkyTerra to offer an integrated MSS/ATC service to users equipped with dual-mode handsets. SkyTerra was authorized to deploy a terrestrial network using the 1,725 base stations permitted under the Commission’s then-existing rules. Once again, no parties raised the overload interference issue in response to the grant of this authorization, and no parties filed a petition for reconsideration of the authorization.”
- Third, “in 2005, in response to petitions for reconsideration of its 2003 Order, including the one filed by USGPSIC, the Commission revised its MSS/ATC rules. The new rules removed the limitation on the number of terrestrial base stations (1,725) so long as operations met certain technical parameters. . . . The Commission received no reports or complaints of potential overload interference following the release of this order – which had explicitly lifted the base station limit.”
- Fourth, “in 2009, Harbinger and SkyTerra filed an application for transfer of control of SkyTerra to Harbinger. . . . Once again, no party raised the separate receiver overload interference issue.”
- Fifth, “later in 2009, SkyTerra and the USGPSIC submitted a joint letter to the Commission stating that the Out-of-Band Emissions interference

issue had been resolved. The joint letter did not raise the different receiver overload interference issue.”

- Sixth, “in March 2010, the three Commission Bureaus (the Office of Engineering and Technology, the International Bureau, and the Wireless Telecommunications Bureau) jointly issued two orders. The first of those orders granted Harbinger’s request to acquire SkyTerra. That Order detailed Harbinger’s plans to construct a hybrid-satellite-terrestrial network and noted Harbinger’s intention to cover 90 percent of the U.S. population via the terrestrial component of its network. That Order imposed conditions on Harbinger that required it to build out this network but did not alter or waive any MSS/ATC rules. In the second Order, the International Bureau granted Harbinger’s request for a modification of its MSS/ATC authorization. Again, no parties or entities raised the GPS receiver overload interference issue in response to either of these Orders.”

172. The FCC reiterated this point in an April 6, 2011 Report and Order, stating: “We emphasize that responsibility for protecting services rests not only on new entrants but also on incumbent users themselves, who must use receivers that reasonably discriminate against reception of signals outside their allocated spectrum. In the case of GPS, we note that extensive operations have been anticipated in the L-Band for at least 8 years.”

173. In a letter written by FCC Chairman Julius Genachowski on May 31, 2011, the Commission reiterated this point yet again: “It should not be a surprise to anyone involved in the LightSquared matter that the company was planning for some time to deploy a major terrestrial network in the spectrum adjacent to GPS. For example, the March 2010 Commission Order transferring control from SkyTerra to Harbinger (now LightSquared) explained that Harbinger planned to construct a hybrid satellite-terrestrial network and noted that the terrestrial component of the network would cover 90% of the U.S. A second March 2010 Order addressed technical standards of the new network, including technical standards the GPS industry is only now criticizing. All interested parties had ample time to comment in

advance of these orders. Indeed, the Harbinger/SkyTerra license-transfer proceeding was pending at the Commission for nearly a year.” (Emphasis in original).

174. If the Defendants had explained the facts about their OOB interference issues at any point during this process, or at any point in the simultaneous private negotiations between the parties, instead of continually representing that their only objections were related to OOB interference and that those were resolved, Harbinger would not have committed to invest billions of dollars in a new network that, according to Defendants in 2011-2012, could not be used.

#### **VI. AS CONCERNS BEGAN TO BE REVEALED, HARBINGER WORKED IN GOOD FAITH TO FIND A SOLUTION.**

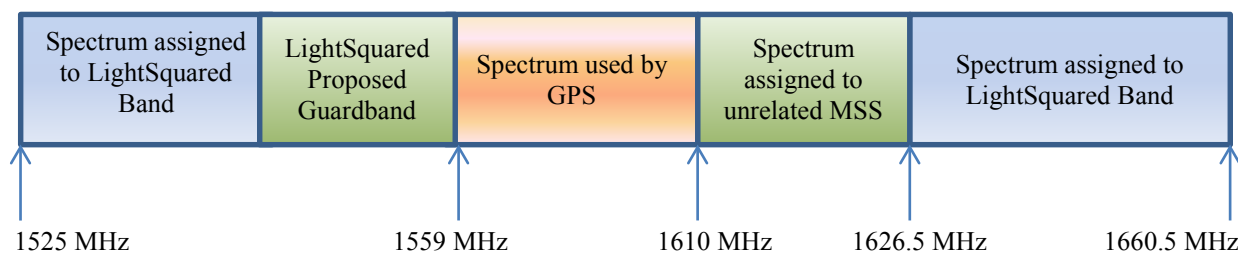
175. At first Harbinger and LightSquared thought that they might work out a compromise solution to the newly disclosed concerns, as they had been able to do with similar issues in 2002, 2007, and 2009. In a letter to the FCC on January 21, 2011, LightSquared therefore stated that “being respectful of the concerns raised at the FCC by the GPS community, we are willing to accept as a condition on a grant of our request [that is, the one that led to the Handset Waiver] the creation of a process to address interference concerns regarding GPS . . . LightSquared will work diligently and cooperatively with the Commission, NTIA, and the federal agencies, and with the GPS community.” LightSquared pointed out the long history of working cooperatively to resolve potential GPS interference issues.

176. Five days later the FCC adopted LightSquared’s suggestion and, in its January 26, 2011 order, the FCC ordered the creation of a technical working group “that brings LightSquared and the GPS community together to address these interference issues expeditiously.” In doing so, the FCC stated that it envisioned “a working group in which cooperative and candid discussions can ensue” and emphasized its expectation that the “GPS

industry [would] work expeditiously and in good faith with LightSquared to ameliorate the interference concerns.” Harbinger had the same hope and expected Defendants to “work expeditiously and in good faith.”

177. Following this order, LightSquared and Harbinger promptly got to work on what they thought would be finding solutions to resolve the set of problems that Defendants still had not fully disclosed. In meetings and in letters to the FCC, Defendants represented they were working in good faith towards a “solution.” Harbinger and LightSquared believed and relied on these representations – representations that turned out to be false.

178. To effectuate a workable compromise, during Spring and Summer of 2011, LightSquared proposed to change its network build-out plan to solve what LightSquared thought were Defendants’ problems. Most significantly, LightSquared agreed not to transmit from its terrestrial stations in the 10 MHz of spectrum that directly abutted the spectrum allocated to GPS use. This proposal would have left Defendants with a significant “guardband” surrounding the spectrum that their receivers are licensed to use. In the simplified band graph, the LightSquared solution would look like this:



179. This proposed solution (and others) dealt with the generally applicable GPS objections. For a relatively small number of “high-precision” receivers, additional solutions were needed, according to Defendants.

180. While Defendants offered no proposals themselves, many scientists, including engineers from private companies and researchers at the Massachusetts Institute of Technology, worked with LightSquared to design technical solutions.

181. LightSquared also partnered with Javad GNSS – a company founded by Dr. Javad Ashjaee, a renowned GPS engineer formerly employed by Defendant Trimble – to develop a technical solution. According to Dr. Ashjaee, who was familiar with the operation of the GPS receivers through his previous employment with Trimble, the OOB “problem is not a difficult one to solve, once you decide to solve it.”

182. Javad GNSS created a high-precision filtering solution that resolved Defendants’ stated OOB objections while being entirely compatible with the Harbinger-sponsored network. As a result of LightSquared’s efforts, Javad GNSS manufactured prototypes of the filter and was ready to commence production runs as soon as Defendants said they accepted the solution.

183. To provide even further assurances to the Defendants, LightSquared also offered to reduce the power of its terrestrial transmissions below the level that that FCC had already authorized (and to which Defendants had failed to raise timely objections).

184. With this kind of progress, Harbinger and LightSquared at first expected all Defendants’ objections could be resolved. Defendants had, after all, previously called LightSquared and Harbinger predecessors “good spectrum neighbors” when the parties had negotiated the 2002 OOB Agreement and the parties had just negotiated the 2009 OOB Agreement.

185. Harbinger’s and LightSquared’s initial belief in Defendants’ good faith was shared by others in the industry. The market showed that it believed a solution was likely as

LightSquared continued to find customers willing to commit to using the new network. Of great import, on July 28, 2011, LightSquared announced a 15-year commitment from Sprint for spectrum and hosting services, which could not have been negotiated if Sprint thought LightSquared faced any risk the FCC would shut down all use on its designated spectrum. This agreement would have allowed the Harbinger network to deploy the network almost at once upon resolution of Defendants' objections. With this Sprint commitment in place, LightSquared signed additional agreements with retailers and regional service providers, again on the assumption that all technical differences with the GPS companies could be ironed out.

186. As Defendants rejected one solution after another, it gradually became clear that Defendants were not interested in a "solution" at all. To the contrary, Defendants' conduct demonstrated that the only way they were interested in fixing their OOB interference problem was to destroy LightSquared, after which Defendants could resume unimpeded (if unauthorized) use of the LightSquared Band. To put this into context, rather than fix their own receivers to function only on GPS spectrum, Defendants wanted to convert 20 MHz of the nation's valuable radio frequency spectrum that had been coordinated and authorized for a new mobile communications network to now be used solely for protecting GPS receivers for which the Defendants had deliberately cut corners when manufacturing. For comparison, 20 MHz is the amount of spectrum that Verizon, one of the nation's two largest carriers, was using to run its 4G network at the time.

187. But Defendants did not make their extreme position clear at the outset. Instead, they lulled Plaintiffs and others into thinking there might be a real solution by conducting "testing" of possible "solutions." If Defendants' current position is to be credited, then these tests were not necessary to prove what Defendants now admit they already knew: there was no

“solution” for the redesign of Defendants’ products. In any event, some of the tests were not done to provide accurate assessments. Defendants undermined these tests in various ways, including by providing for testing obsolete and overly sensitive devices. Defendants then used these test results to make it appear they only recently discovered the “problem,” even though Defendants now admit there was no “problem,” only a conscious plan to design their products to operate in the LightSquared spectrum.

188. Defendants also engaged in an all-out public relations campaign (supported in part by the misleading test results) to denigrate Harbinger, LightSquared, and their principals, who were called newcomers bent on “jamming” all extant GPS receivers, when, in fact, LightSquared’s predecessor had operated in the same spectrum since the 1990s, Harbinger had been involved since 2005, and all interference concerns raised by the GPS industry had long been resolved by agreement with Harbinger’s and LightSquared’s predecessors. Defendants’ lobbyists and PR people were joined by persons who worked in similar capacities for AT&T and Verizon.

189. On February 12, 2012, the FCC entered an order proposing a suspension of LightSquared’s authorization to operate terrestrial base stations in the MSS Spectrum (the “2012 Order”) until Defendants’ objection could be resolved.

**VII. IT IS NOW CLEAR DEFENDANTS’ PURPOSE ALL ALONG WAS TO CONTINUE TO USE SPECTRUM NOW BELONGING TO LIGHTSQUARED INCLUDING BY, IF NECESSARY, DESTROYING LIGHTSQUARED.**

190. Defendants had far more information about their own receivers than did Harbinger or the FCC. Defendants possessed proprietary information about the extent to which the normal operations of the Harbinger-sponsored network would have impacted Defendants’ receivers and whether these difficulties could be corrected at reasonable cost within a reasonable time. If Defendants knew or reasonably believed that they could not make these

repairs at reasonable cost within a reasonable time, they should have disclosed that promptly and fully. Alternatively, if Defendants did possess the technical ability to retrofit and redesign their receivers at reasonable cost, they acted improperly by not making the requisite changes to avoid suspension of LightSquared's operations.

191. Either way, the origin of this problem is Defendants' decision to manufacture receivers that, at a minimum, are constructed so poorly that they cannot filter out signals from neighboring spectrum, and, more likely, at least in some instances, were deliberately designed to work only if they could receive signals outside of assigned spectrum. At all relevant times, Defendants could have manufactured new receivers that did not "listen in" on the Harbinger spectrum or that filtered out LightSquared signals. Defendants could have avoided all present OOB problems by adopting alternative designs. Investigations have shown that filtering the receivers at the time of manufacture would have added little to the total cost per device (in fact, a Garmin representative admitted that a fix might cost less than a nickel per device). To fix the problem after the fact, however, would have been far more costly given that by then Defendants had already sold hundreds of millions of devices.

192. Just as Harbinger had no way of knowing if OOB was a matter of concern until the Defendants fully disclosed the issue in late 2011 and 2012, Harbinger also had no way of knowing, or even acquiring reliable information about, the total cost for completing any of the purportedly necessary repairs or replacements to Defendants' products. Only the Defendants could have known precisely how many units they have sold that relied on OOB, how many of those receivers were still in operation, and what would be required for continued operation of their many different products.



193. Because the Defendants were the only ones with this critical information, it was reasonable for Harbinger to rely on the Defendants to disclose facts material to Harbinger's investment in the new network.

194. From 2001 through 2010, Garmin's sales exceeded \$17.2 billion, Trimble's \$8.8 billion, and Deere's \$208.4 billion.

195. Had defendants made timely disclosures, they would have had to admit that they had deliberately manufactured products doomed to malfunction if anyone used adjacent spectrum as authorized by the FCC since 2003. Defendants would have had to disclose that they deliberately continued to do so long after it became clear that the MSS spectrum would be used for combined terrestrial-satellite transmissions, even through March 2010 when they learned that Harbinger was planning to build out an extensive combined terrestrial-satellite network through billions of dollars in investment.

196. Defendants do not pay anything for the spectrum they use. The U.S. government provides satellite transmissions to them at no cost. As Garmin's 2009 Form 10-K states: "Access to the [GPS] system is provided free of charge by the U.S. government." Defendants' only contribution to the GPS system, in other words, is the manufacture of the GPS receivers themselves. In other words, on the only aspect of the system entrusted to them, Defendants chose to cut corners and manufacture GPS receivers that, according to them, would become inoperable if adjacent spectrum was ever fully used as authorized since 2003.

197. FCC rules make Defendants, not Harbinger, uniquely responsible for the consequences if GPS receivers are manufactured in a way that allows them (let alone requires them) to receive OOB. Under Part 15 of the FCC's rules, 47 C.F.R. 15, GPS receivers are defined as "unintentional radiators," making them subject to Section 15.5, which states that, if

receivers receive signals outside their authorized band, they must do so “subject to the conditions that no harmful interference is caused and that interference must be accepted that may be caused by the operation of an authorized radio station [that is, a transmitter].”

198. In other words, at all times relevant to this dispute, the FCC rules were clear that, when Defendants manufactured their GPS receivers to use or receive signals in adjacent bands, they did so at their own peril and necessarily assumed all risks of interference by authorized transmissions from other licensees operating on their own assigned frequencies. Yet, as FCC Bureau Chief De la Torre made clear in a written statement discussed above, “the GPS community continued to build receivers that they knew were susceptible to interference (remember that they are driving in the wrong lane) because it was cheaper to do so and they decided to accept the business risk of doing so . . . .”

199. One of Defendants’ biggest customers – the United States Department of Defense – has more exacting standards than Section 15.5. The Defense Department required all GPS receivers sold to it to filter out receptions from adjacent spectrum. These requirements were set forth in the Department’s Standard Positioning Service Performance Standards (the “SPSPS”), which states that GPS devices used for Department of Defense purposes should use a “GPS C/A code correlator receiver (and early–minus–late correlator with 1 chip spacing)” that includes “an exact replica of the waveform within an ideal sharp-cutoff filter bandwidth at 24 MHz with linear phase centered at the L1 frequency.”

200. This language means that, under the SPSPS, the receivers must be filtered to receive transmissions only from the spectrum that is specifically assigned to GPS use. The SPSPS also states that this standard “establish[es] a minimum performance level which the

GPS constellation must sustain” and that compliance is “absolutely essential for GPS receiver designers, system integrators, application engineers.”

201. Given the seriousness of the conscious laxity in Defendants’ design and manufacturing practices, and given the potential liability they faced if the true facts about their products were revealed, Defendants had reasons to conceal such information until it finally became clear that Harbinger would succeed in taking its new network live. If Harbinger failed, the truth about Defendants’ faulty receivers could have remained concealed indefinitely.

### **VIII. DAMAGES**

202. The 2012 Order, which effectively stopped the Harbinger-sponsored network from going live, was a victory for Defendants. By putting their own profits first, their activities came at the cost of significant damages to others.

203. Plaintiffs lack standing to seek recovery for damages done uniquely to LightSquared, whose management and possible reorganization is now under the supervision of the bankruptcy court. That result was inevitable once the FCC shut the network down. LightSquared promptly lost most of the customers it had signed, lost Sprint’s 15-year commitment, and lost Nokia. Once these valuable relationships were gone, LightSquared was no longer able to make payments on many of its financing obligations. On May 14, 2012, barely three months after the 2012 Order, LightSquared declared bankruptcy.

204. Defendants also damaged the American people. As the FCC noted in approving the 2010 Acquisition, the Harbinger-sponsored network would confer a “significant public benefit.” Now that Defendants have succeeded in shutting down the network, the public will not receive these benefits and a large block of radio frequency spectrum will lay idle as the country slips further and further behind in broadband coverage.

205. LightSquared, and likely other parties, therefore, have their own claims against Defendants. Harbinger is not suing on LightSquared's behalf, nor is it seeking any damages that LightSquared has suffered. Harbinger is also not suing on anyone else's behalf (except with respect to Count V, under which Harbinger is suing on behalf of New York consumers as set forth in New York General Business Law Section 349), nor is Harbinger seeking to recover any damages that anyone else has suffered (though it would welcome any of them who wish to join this case as additional plaintiffs to promote efficiency and convenience). This complaint for now seeks only the unique damages that Harbinger has suffered. These damages amount to what Harbinger invested in the new network in reliance on Defendants' extended course of conduct, concealment, and misrepresentations, minus whatever mitigation Harbinger and LightSquared are able to achieve.

206. These damages can now be estimated at about \$1.9 billion minus any ultimate value the Harbinger investment may have in LightSquared, plus prejudgment interest.

### **COUNT ONE**

#### **Violation Of Rule 10b-5 Of The Securities Exchange Act Of 1934 (15 U.S.C. § 78a et seq. and 17 C.F.R. § 240.10b-5)**

207. Harbinger incorporates and re-alleges all paragraphs herein.

208. Defendants had a duty to disclose material information and refrain from making material misstatements that they knew Harbinger would rely on in connection with the purchase or sale of securities. Defendants also had a duty to correct any such misstatements or omissions. Defendants violated these duties.

209. Defendants made and failed to correct material misstatements and omissions which included, but were not limited to, statements about their interference concerns related to the build-out of a network utilizing terrestrial transmissions on the MSS spectrum; statements

that their concerns were limited only to possible OOBE; statements that these concerns had been solved; statements that their only objections to Harbinger's 2010 Acquisition and the concurrent 2010 ATC Modification were related solely to OOBE; and failure to articulate prior to March 2010 those objections related to OOB.

210. Defendants directly and indirectly used e-mails, phone calls, and other instrumentalities of interstate commerce in making their material misstatements and omissions. In reliance on Defendants' wrongful actions, Plaintiffs entered into the purchase and sale in March 2010 and at other times of securities registered with the SEC and listed on national stock exchanges.

211. Harbinger justifiably relied on Defendants' material misstatements, omissions, and failures to correct, when Harbinger purchased and sold securities, including, but not limited to, when it purchased shares and debt instruments in SkyTerra and when it agreed to the March 2010 Acquisition including a merger with a public company and formation of LightSquared.

212. Had Defendants not made material misstatements, omissions, and failures to correct, Harbinger would either not have purchased securities or would have paid far less for them.

213. Harbinger thereby suffered economic loss due to Defendants' material misstatements and omissions.

**WHEREFORE**, Plaintiffs pray for:

- A. Damages of at least \$1.9 billion less any mitigation effected;
- B. Prejudgment interest;
- C. Costs; and
- D. Such further relief as may be appropriate.

**COUNT TWO**

**Fraud**

214. Harbinger incorporates and re-alleges all paragraphs herein.

215. Harbinger reasonably relied on Defendants' conduct, misrepresentations, and omissions when it invested in SkyTerra, LightSquared, and the new network. Defendants knew and intended that Harbinger would so rely and Harbinger was damaged in doing so.

**WHEREFORE**, Plaintiffs pray for:

- A. Damages of at least \$1.9 billion less any mitigation effected;
- B. Prejudgment interest;
- C. Punitive damages not to exceed double the actual damages;
- D. Costs; and
- E. Such further relief as may be appropriate.

**COUNT THREE**

**Negligent Misrepresentation**

216. Harbinger incorporates and re-alleges all paragraphs herein.

217. Defendants had a duty to exercise reasonable care to refrain from making any misstatements or omissions and to correct any that were made if Defendants knew or should have known they were false and knew or intended Harbinger would rely upon them in conducting its business activities. Defendants violated these duties. Harbinger relied on these misstatements, omissions, and failures to correct and was damaged as a result.

**WHEREFORE**, Plaintiffs pray for:

- A. Damages of at least \$1.9 billion;
- B. Prejudgment interest;
- C. Punitive damages not to exceed double the actual damages;

- D. Costs; and
- E. Such further relief as may be appropriate.

**COUNT FOUR**

**Equitable Estoppel**

218. Harbinger incorporates and re-alleges all paragraphs herein.

219. Harbinger has suffered unconscionable injury due to Defendants' deception, including but not limited to the loss of at least \$1.9 billion dollars invested in LightSquared, its predecessor entity SkyTerra, and the build-out of LightSquared's planned wireless network.

**WHEREFORE**, Plaintiffs pray for:

- A. Damages of at least \$1.9 billion;
- B. Prejudgment interest;
- C. Costs; and
- D. Such further relief as may be appropriate.

**COUNT FIVE**

**Deceptive Acts And Practices In Violation Of  
New York General Business Law Section 349**

220. Harbinger incorporates and re-alleges all paragraphs herein.

221. Defendants engaged in materially misleading consumer-oriented conduct that directly affected New York consumers at large. The entire purpose of the Harbinger-sponsored network was to expand access to wireless broadband access to all Americans and to encourage competition to improve the price and quality of wireless communications throughout the country, including New York. As the FCC stated in its March 26, 2010 Order, the Harbinger-sponsored network would have provided a "significant public benefit." Defendants deprived

New York consumers of this benefit when they misrepresented, omitted to disclose, and failed to correct misstatements, and when they refused to work in good faith thereafter.

222. Harbinger has suffered damages as a result.

**JURY TRIAL DEMAND**

Plaintiffs hereby request a trial by jury on all claims so triable.

**PRAYER FOR RELIEF**

**WHEREFORE**, Plaintiffs pray for:

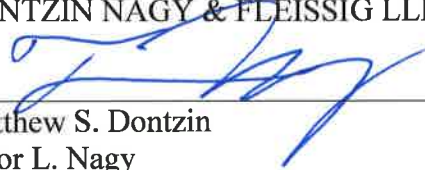
- A. Damages of at least \$1.9 billion;
- B. Prejudgment interest;
- C. Punitive damages (not to exceed double the actual damages);
- D. Costs;
- E. Attorney fees; and
- F. Such further relief as may be appropriate.



Dated: August 16, 2013

Respectfully submitted,

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## **APPENDIX OF DEFINED TERMS**

1. 2001 Rulemaking Proceeding – proceeding initiated by August 17, 2001 Notice of Proposed Rulemaking released by the FCC and entitled “Flexibility for Delivery of Communications by MSS Providers,” which concluded in 2003. *See* ¶ 100.
2. 2002 OOB Agreement – July 17, 2002 agreement between MSV and USGPSIC. *See* ¶ 104.
3. 2003 Order – January 29, 2003 order issued by the FCC allowing combined terrestrial and satellite use of the MSS spectrum, effectively granting MSV’s request in the 2001 Rulemaking Proceeding. *See* ¶¶ 106–08.
4. 2004 Order – November 8, 2004 Order issued by the FCC authorizing requested ATC operation by MSV. *See* ¶ 114.
5. 2005 Order – February 25, 2005 order issued by the FCC removing earlier limits on the number of terrestrial base stations that an operator could use to broadcast in the MSS spectrum. *See* ¶ 124.
6. 2007 SPA –December 15, 2007 Securities Purchase Agreement among Harbinger, SkyTerra LP, and Mobile Satellite Ventures Finance Co. *See* ¶ 125.
7. 2009 OOB Agreement – August 13, 2009 agreement among Defendants and SkyTerra. *See* ¶ 144–45.
8. 2012 Order – February 12, 2012 order by the FCC proposing to suspend LightSquared’s authorization to operate terrestrial base stations in the MSS Spectrum. *See* ¶ 189, 202–03.
9. Band – contiguous range of frequencies. *See* ¶¶ 36–37.
10. Bandwidth – the width of the frequency range in a specified band, the size of which varies directly with the capacity to transmit information. *See* ¶¶ 36–37.
11. Broadband – a wide band capable of carrying a relatively large amount of information. *See* ¶¶ 36–37.
12. C/N – carrier to noise ratio (see also “S/N”). *See* ¶ 48.
13. Coalition – Coalition to Save Our GPS. *See* ¶ 29.
14. Coordination Agreement – December 20, 2007 agreement between SkyTerra and ISAT. *See* ¶¶ 68, 129–35.
15. Deere – Deere & Company. *See* ¶ 25.
16. Defendants – Deere, Garmin, Trimble, USGPSIC, and Coalition. *See* ¶¶ 25–29.
17. FCC – Federal Communications Commission.
18. Garmin – Garmin International, Inc. *See* ¶ 26.

19. GPS – Global Positioning System.
20. GPS Band – 1559 MHz to 1610 MHz. *See* ¶¶ 40–41.
21. Handset Waiver – January 26, 2011 order by the FCC conditionally permitting LightSquared to transmit to handsets that would use only terrestrial-based signals. *See* ¶¶ 162–71.
22. Harbinger – Plaintiffs. *See* ¶¶ 11–24.
23. ISAT – Inmarsat. *See* ¶¶ 39, 57, 68, 128–130.
24. ITU – International Telecommunication Union. *See* ¶¶ 138–40.
25. L-Band – terms used with varying meanings but generally equivalent to LightSquared Band (the term used in the Complaint). *See* ¶ 39 n.2.
26. LightSquared Band – 1525 MHz to 1559 MHz and 1610 MHz to 1660.5 MHz. *See* ¶ 39–41.
27. Lower LightSquared Band – 1525 MHz to 1559 MHz. *See* ¶ 41.
28. Motient – Motient Services, Inc. *See* ¶¶ 97–101.
29. MSS – Mobile Satellite Service. *See* ¶¶ 38–40.
30. MSV – Mobile Satellite Ventures LP. *See* ¶ 56, 99–114.
31. Nokia – Nokia Siemens Networks. *See* ¶¶ 154–61.
32. Noise – unwanted or unauthorized transmissions within a given band of spectrum. *See* ¶ 48.
33. NTIA – National Telecommunications and Information Administration. *See* ¶ 34.
34. OOCE – Out-of-Channel Emissions. *See* ¶ 47.
35. OOB E – Out-of-Band Emissions. *See* ¶¶ 47, 79–87, 102–10.
36. OOB R – Out-of-Band Reception. *See* ¶¶ 47, 79–97.
37. Overload interference – OOB R interference. *See* ¶¶ 47, 79–97.
38. Plaintiffs- Harbinger Capital Partners LLC, Harbinger Capital Partners II LP, Harbinger Capital Partners Master Fund I, LTD., Harbinger Capital Partners Special Situations Fund, L.P., Harbinger Capital Partners Special Situations GP, LLC, HGW GP, LTD, HGW Holding Company, L.P., HGW US GP Corp., HGW US Holding Company, L.P., Credit Distressed Blue Line Master Fund, LTD., and Global Opportunities Breakaway LTD. *See* ¶¶ 11–24.
39. RNSS – Radionavigation Satellite Service. *See* ¶ 38–40.
40. SkyTerra – SkyTerra Communications, Inc., SkyTerra Subsidiary, LLC, SkyTerra LP, and all their affiliates and predecessors. *See* ¶¶ 98–104, 133–153, 171–74.

- 41. S/N – signal to noise ratio (see also “C/N”). *See* ¶ 48.
- 42. SPSPS – Standard Positioning Service Performance Standards set forth by the United States Department of Defense. *See* ¶¶ 199–200.
- 43. TMI – TMI Communications. *See* ¶¶ 99–101.
- 44. Trimble – Trimble Navigation Limited. *See* ¶ 27.
- 45. Upper LightSquared Band – 1610 MHz to 1660.5 MHz. *See* ¶ 41.
- 46. USGPSIC – U.S. GPS Industry Council. *See* ¶28.